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OF
SYPHILOGRAPHY AND DERMATOLOGY.

DEVOTED TO THE CONSIDERATION AND TREATMENT OF

VENEREAL AND SKIN DISEASES.

EDITED BY

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JANUARY, 1871.

Original Communications.

ON DACTYLITIS SYPHILITICA.

BY R. W. TAYLOR, M. D.,

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THE tegumentary structures of the fingers and toes are frequently the seat of various syphilitic lesions in the secondary period. These earlier manifestations, however, are, for the most part, of an ephemeral character, and, as a rule, do not leave any trace of their existence, nor are they the cause of any permanent impairment of these members.

The same superficial structures are also involved in the tertiary period of syphilis, and they are then, very frequently, the seat of destructive changes of a chronic character, which produce considerable functional impairment. It, however, may be stated, almost as a rule, that the tertiary lesions of the integuments of the fingers and toes are never exclusively confined to these organs, but that they are coincident with, or follow, from a direct continuity of tissue, similar affections of the palms or the soles.

There is a marked difference in the appearance of the tertiary lesions of the palmar and plantar surface from those observed on the dorsal surface. The former consist, for the most part, in a peculiar thickening of the epidermis, with a more or less copious exfoliation, which may or may not involve the nails; whereas in the latter cases, which are less frequent, there is a thickening of the whole structure of the derma, with very little if any affection of the epidermis. The former lesion is known as palmar and plantar psoriasis, and the latter as a non-ulcerating tubercular syphilide, which generally undergoes resolution, but in this position, in rare instances, ulcerates.

The mobility of the parts is, of course, very materially interfered with by these forms of thickening, and, from their rebelliousness to treatment, they are often very formidable affections. Clinical observation has proved that these conditions of the integument occur upon the fingers much more frequently than upon the toes.

It is not intended, however, to enter fully into the consideration of these more superficial lesions, but to present the clinical history of a peculiar and rare manifestation of syphilis in the deeper structures of the fingers and toes. This affection consists in the deposit of the peculiar gummy material of tertiary syphilis in one or all of the deep tissues, and is characterized by peculiar deformities. Its literature is very scanty in details, and of quite recent origin. It has been called, by some observers, syphilitic panaris, and by others, syphilitic dactylitis. The application of the word panaris, which is merely a corruption of the word paronychia, to the affection is neither appropriate nor expressive, as it applies to a simple acute inflammation of that portion only of the fingers upon which the nails are situated; whereas the lesion under consideration is a chronic specific inflammation generally involving more than one and frequently all the phalanges without any affection of the nails. The word dactylitis, from the Greek δάκτυλος, a digit or finger, fully expresses the condition: therefore its use will be retained here, as it applies with equal correctness to the fingers and the toes. The recorded cases of this rare lesion are only five in number, excluding those of Erlack, and the descriptions of it as given in the text-books are very meagre, as they are all based upon one case reported by Nélaton. In 1859 Chassaignac[1] first called attention to this affection, but his description was not sufficiently comprehensive, neither was it clinical in its character. Nélaton,[2] in 1860, devoted a clinical lecture to its consideration, and reported a case, and referred to another which had been observed by him. In 1866 Professor A. Lüche,[3] of Berne, published the details of two very important cases. M. Archambault,[4] of the Hôpital des Enfants, observed a case, due to hereditary syphilis, and published it in 1869. In the present year, 1870, two other important cases have been published, the one, by Dr. H. Risel,[5] as occurring at the clinic of Prof. R. Volkman, of Halle, the other, by Dr. R. Berg,[6] of Copenhagen. Early in the present year, 1870, this lesion developed in one of my own patients, and since then I have carefully studied its course. My attention has also been called to a very interesting case by Professor B. W. McCready, of Bellevue Hospital, who has kindly given me the notes of it, and allowed me the opportunity of observation. My case is important as presenting some points not observed in the others, and I purpose, from a clinical study of the combined number of cases, to present a history of this rare affection. There can be no doubt of its rarity, for many excellent authors do not even mention it, and others, who do, merely refer to Nélaton's case. Previous to a general consideration of the subject, I will briefly describe my own case, and then, in a succinct manner, present the interesting points of all the other cases.

Edward A., a peddler, aged 44, had the initial lesion of syphilis in July, 1867, which was followed, in about a month, by a large papular syphilide upon the forehead, small papules upon the body, pustules in the scalp, mucous patches in the mouth, and rheumatoid pains. Later in the year he had an iritis. During the years 1868–9 he was troubled with pustulo-crustaceous ulcers upon various parts of the body, which have left their characteristic cicatrices. In the summer of 1869 he had very extensive gummy tumors of the scalp and over the tibiæ, which ulcerated and were very rebellious to treatment. He came to me, at the New York Dispensary, in October, 1869, having a non-ulcerating tubercular syphilide above the right eyebrow. At this time he gave me the history detailed above, and with the exception of slight emaciation and weakness, and the tubercles upon the forehead, he presented no other lesion of syphilis. Under the influence of a combination of biniodide of mercury and iodide of potassium with the citrate of quinine and iron his health improved, and his tubercular syphilide subsided and disappeared, leaving a cicatrix. He then had no other syphilitic manifestation until February, 1870, when he complained of a swelling of one of his toes. He stated that he had of late experienced some difficulty in walking, and that, for about a month, he had noticed that the toe gradually grew larger.

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[1] "De la Dactylite Syphilitique."—*Clinique Européenne*, 1859, p. 238.

[2] "Du Panaris Syphilitique."—*Gazette des Hôpitaux*, 1860, pp. 105, 106.

[3] "Die Syphilitische Dactylitis."—*Berliner Klinische Wochenschrift*, Nos. 50 and 51, 1867.

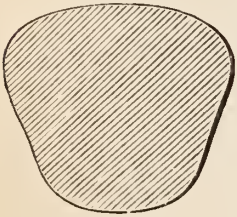
[4] *L'Union Médicale*, No. 140, 1869.

[5] "Zur Casuistik der Syphilitischen Finger-und Gelenks-Affectionens."—*Berliner Klinische Wochenschrift*, No. 7, 1870.

[6] "Fall von Gummöser (Syphilitischer) Dactylitis."—*Archiv für Dermatologie und Syphilis*, No. 2, 1870.

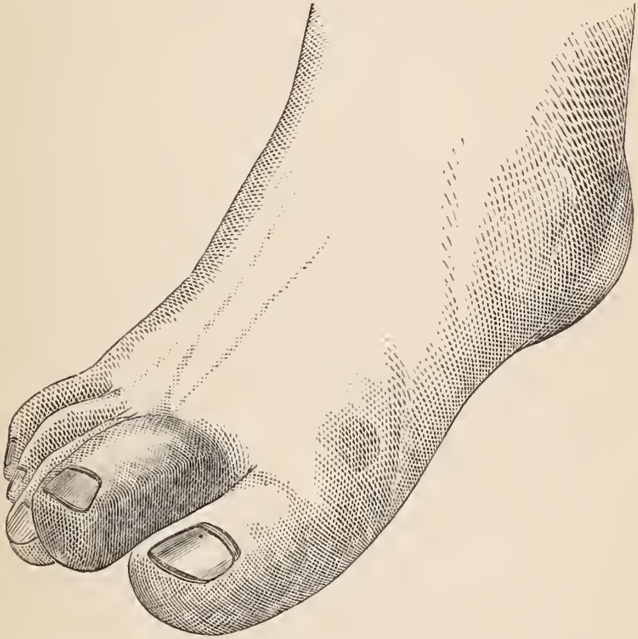
Upon examination, the second toe of the right foot was found very much enlarged, and as a consequence it could not maintain its position between the first and third toes, but was elevated more than half an inch above the rest, and rested upon the toes on each side. The circumferential measurement of this toe was three inches, and its transverse and vertical measurement was a little more than an inch, while the same measurements of the corresponding toe of the opposite side were respectively an inch and a quarter, and about five-eighths of an inch. The swelling was perfectly symmetrical along the whole length of the toe, and the integument, which was stretched and shining and not transversely furrowed at the joints, merged, after forming a distinct ridge, into the integument of the foot. When viewed endwise the toe presented a well-marked wedge-shape, its dorsum, which would represent the base, being slightly convex, its sides being flattened and sloping, and its plantar surface or apex was somewhat rounded or truncated, as seen in figure No. 1, which represents an imaginary transverse section. The nail was perfectly normal, there was no inflammation at its base or sulci, and when pressed strongly upon its flat surface or on its end no pain was produced. The color of the toe was slightly violaceous, evidently from capillary congestion. To the touch it presented, when squeezed, a sensation of firmness combined with elasticity which did not pit. A thermometer placed between the great toe and the enlarged one indicated a temperature of 93° Fahr., and by the hand no elevation of temperature was felt. It was evident from a careful examination that the distending deposit under the integument was most copiously distributed upon the dorsum and sides of the toe, and very much less upon its

Fig. 1.



plantar surface, for when the toe was very much elevated the extensor tendon could be felt to be put on the stretch. Though carefully sought for, crepitation could not be elicited at any of the joints. The movements of the phalangeal joints were almost entirely impaired by the thickened condition of the tissues around them, but considerable movement could be produced in the metatarso-phalangeal articulation, particularly when the great and third toes were stretched apart, and then the enlarged toe would fit in between them; but immediately that the foot was placed upon the ground and the normal toes resumed their position, the enlarged one slowly rose until it rested on their sides and dorsum. This condition is shown in figure No. 2.

Fig. 2.



The infiltration was so copious that even long-continued firm pressure failed to clearly reveal the condition of the bones, but the joint structures and the first and second phalanges were noticed to be considerably enlarged, and the first phalanx was thought to be more enlarged than the second. Pain was not present in the toe, neither was it produced when the integument was pinched, nor when the lateral surfaces of the joints were pressed, nor when their articular surfaces were firmly shoved together. The length of the toe was normal.

Being familiar with similar cases, previously reported, and with the patient's undoubted syphilitic history, I diagnosticated this as one of dactylitis syphilitica. The patient was immediately placed upon the same treatment as before, and directed to cut his shoe in order to prevent chafing, and to favor it as much as possible in walking, but not to apply any external remedies. I have seen the patient at least once a week, during the whole period of the existence of the lesion, and I will briefly note its progress.

The toe remained in the condition above described, without any apparent change, until June, when it was noticed that the infiltration was slightly less, and that it had sunk down a little between the other toes. But slight crepitation had been heard in April. The tension of the integument was less, and the color remained still slightly violaceous. The transverse furrows of the integument at the joints began to reappear, and the articular movements were a little improved. Pain was still absent. It was still found that the first phalanx and its joint were much enlarged. In July the infiltration was still less, and the various other resulting conditions were much improved. The deep structures could now be quite accurately examined; the second phalanx was not perceptibly enlarged, but there was still an enlargement around the first phalanx and its joint, and distinct crepitation was elicited. The iodide of potassium was given alone, during this month, in fifteen-grain doses, in consequence of an obstinate diarrhœa. In August the diminution in the size of the toe was very manifest; but the absorption had taken place from the integument and the deep structures were still enlarged. The toe had resumed its normal position. Distinct crepitation was still plainly heard when the articular surfaces between the first and second phalanges were rubbed upon one another, but not between the second and third phalanges. At this time, fearing a disorganization of the joint, I bandaged the toe very firmly with adhesive plaster. The crepitation could be readily heard from the month of April to the month of November.

The infiltration of the skin has continued to be slowly absorbed, until now, early in December, it is hardly perceptible. The tumefied condition of the deep structures is also slowly subsiding, but it is still slightly perceptible at the first phalanx and its joint, where the crepitation is now much less. The movements of the joints are free, and locomotion is readily accomplished. But lately an arched appearance has been noticed in the long axis of this toe, the most prominent part being at the articulation between the first and second phalanges. This deformity is readily effaced if the toe is elevated by the end of its under surface, but immediately resumes its arched condition when the pressure is removed. There is evidently an unbalanced action between the extensors and flexors, due to disorganization of some part of the joint-structures, and there is a flaccid condition of the ligaments, which is very readily appreciated if traction is made upon the toe, as it then will elongate slightly, and move freely in various directions. At this time, also, a shallow transverse ridge was seen about the middle of the nail: it was not the result of destructive change, but merely a groove, such as is sometimes observed after adynamic diseases.

The general condition of the patient had improved very much since warm weather, and he had no visible progressive lesion of syphilis.

Nélaton's Case was that of a man aged 50 whose right middle finger swelled upon three occasions. The augmentation in volume was mostly developed in the first phalanx, a little less in the second, and scarcely any in the third. The whole of the first phalanx was involved, and more especially upon the palmar than dorsal aspect. Movement was slightly impaired, and pressure induced slight pain, which, however, existed spontaneously. The integument was stretched and somewhat livid. Under an anti-syphilitic treatment it subsided.

Lücke's Cases:—

1. A syphilitic man, aged 45, having nodes upon the sternum and a swelling of the sterno-clavicular articulation, observed, in April, 1860, that the little finger of his right hand and the great and second toes of the left foot and the second toe of right foot became enlarged. The left knee became swollen and painful, and its articular capsule became thickened, and fluctuation could be felt. Soon after the left little finger enlarged. The swelling in the toes and fingers consisted in a uniform enlargement of all the phalanges except an unusual swelling at the second phalanx of the right great-toe. The integument was red and tense, and the articular cutaneous furrows were effaced. Crepitation was readily heard between the articular surfaces of the phalanges, and abnormal movement existed, particularly in the little finger, the joint of which was quite loose. The patient had, besides, an inflammation of the body and articulations of the fourth cervical vertebra, which interfered with the maintenance of the erect position of the head. Under a mercurial treatment the swelling in the fingers and toes subsided in about three months.

2. A man aged 50, having had very severe syphilitic lesions, particularly gummy deposits in the bone and connective tissue, and painful enlargement of the knee and wrist, noticed that his right great-toe swelled gradually and uniformly, and was soon followed by swelling of the second toe of the left foot. The swelling was due to a uniform enlargement of the phalanges, and a simultaneous thickening of the soft parts. Movement was impaired, but pain was absent. The integument of the toes of this case also was tense and resistant. At first he was treated by mercurial innunctions, which caused some coexisting gummy tumors to disappear, but the swelling in the toes remained. Crepitation could be distinctly heard in the phalangeal articulation of each toe. The gummy tumors, which had healed, became ulcerated again, and the great-toe

became much larger. The phalangeal articulation of the second left toe became opened by ulceration, and a very distinct and harsh crepitation was heard. Under a tonic treatment and the use of iodine, the toes subsided to their normal size in about ten months.

Prof. Lüche also refers to three cases observed by Dr. Erlack, but does not give their details.

1. A syphilitic woman, 48 years of age, had an indolent enlargement of the phalanges of several fingers, which was cured in about eight months.
2. A young woman, having had a general rupial eruption, had a uniform enlargement of several of the articulations of the fingers.
3. A young woman became syphilitic in July, 1855, and in the month of September noticed a thickening of the articulations of the fingers.

Berg's Case.—A man aged 35 contracted syphilis in 1854, which manifested itself during the first two years by various cutaneous lesions. In the course of the seven following years he was troubled with recurring syphilides of an ulcerating and serpiginous character, for which he took the bichloride of mercury. In the ninth year of his syphilis, he being then 44 years of age, he observed that the first phalanx of his right middle finger became enlarged; the swelling, however, extended in its whole length, being seated in the bone of the first phalanx and further on in the soft parts. The finger was sensitive to pressure. The swelling of the phalanx rapidly increased during the following weeks. Very soon an hydrarthrosis was observed in the first phalangeal articulation, and a spot formed upon the radial side of the enlarged phalanx which was easily indented, and crepitated slightly. In September the bony tumor had increased in size, but became slightly reduced by compression and external applications. The patient, during the year following, did not pursue an active treatment, and towards the end of the year the phalanx was very much enlarged, and presented a balloon-shaped appearance, measuring in circumference a little more than five inches, while the circumference of the corresponding finger of the opposite side was a little over two inches; it was also much increased in length. The integument and bony structures of the last two phalanges were normal, but the articulation between the first and second phalanges was much distended by fluid, and its ligaments became so loose and flaccid that movement could be produced in various directions, but voluntary motion was absent, and the finger was useless for the performance of its functions. There was no crepitation, and the joint was only slightly sensitive to pressure. It was thought that the ulnar side of the phalanx, near this point, was hypertrophied out of proportion to the rest of the bone. The enlarged finger displaced the other fingers laterally, and it maintained a position always slightly behind them. There was no lesion of the metacarpo-phalangeal joint. The integument over the enlarged phalanx was normal but tense, and could be moved over the bone beneath, which felt as if it was evenly enlarged, but upon its radial side the spot before mentioned became thinner and pitted more upon pressure; still, with slight crepitation and scarcely any pain, gradually resuming, by its elasticity, its distended condition. The bony wall gradually became thinner, and a minute opening was made, giving exit to a clear viscid fluid. Upon probing, a cavity was found, but dead bone was not felt, nor were the parts sensitive. The swelling gradually diminished, especially upon its radial side, and the incisions opened and closed at various intervals, giving exit still to the viscid fluid, which sometimes contained cheesy masses.

Fig. 3.

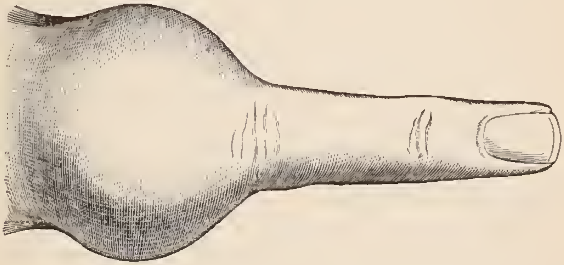
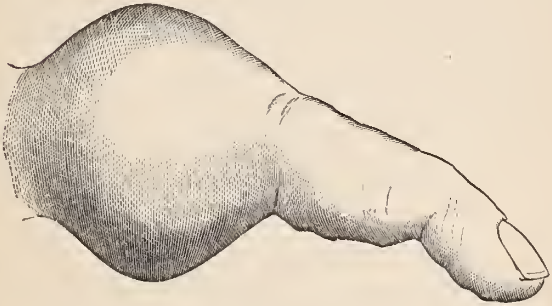


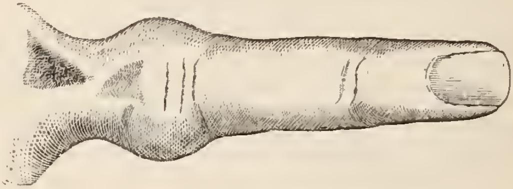
Fig. 4.



AFTER BERG.

In March, 1865, the circumference of the phalanx was diminished to a little more than three inches, and its length was shortened about a third of an inch. The joint was still in the same condition. An active inunction treatment was now instituted, and sulphur-water was drunk copiously, and the finger rapidly reduced in size, and the fistulous tract, which had been reopened intentionally, then became permanently closed. In July, 1865 (the lesion having commenced in July, 1863), the phalanx was much reduced, measuring less than three inches in circumference, and was atrophied in length, measuring about one and one-third inches, while its fellow of the other hand was nearly two inches in length. The end of this finger was a little behind that of the ring-finger, and the distance from the lower portion of the middle joint to the bottom of the interdigital space was slightly less than that of the other hand. The phalanx was constricted at its centre, with a slight depression on its dorsal surface, but there was a little enlargement of the epiphysis. The integument over this phalanx had become wrinkled, and was not adherent to the bone, even at the point of incision, and the periosteum was not painful. The usefulness of the finger was almost wholly restored. Since this time the patient has not suffered from any lesion of syphilis.

Fig. 5.



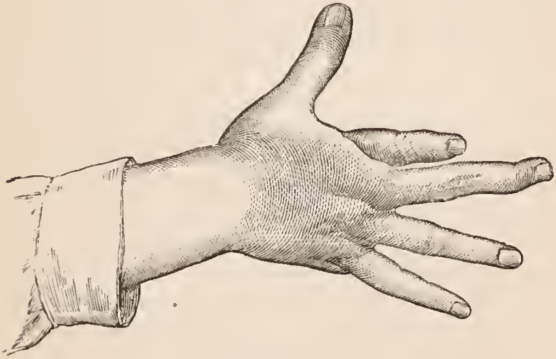
AFTER BERG.

Volkman's case is evidently one of hereditary syphilis, and though a connected history is wanting, the syphilitic nature of the case is undoubted; first, from the typical course of the osseous lesions and from their peculiar histological structure, and, secondly, from the fact that after having been treated unsuccessfully for many years by non-specific remedies, these affections rapidly yielded to the specific action of iodide of potassium.

A girl, when fourteen years of age, had a swelling of the upper part of the left ulna, and at her twentieth year, having in the mean time been unhealthy, she noticed a gradual swelling in the right wrist, left knee-joint, and left ankle. Two years after this her right foot swelled; but the skin over the joint was not involved. Motion gradually became impaired until a fixed and slightly flexed position was produced. Spontaneous pain did not exist, but the parts were sensitive to pressure. The knee-joint recovered its mobility in a year, and the left ankle-joint in about five years, whereas the affection in the right ankle disappeared and then recurred with greater severity. This was coincident with pain in the head and limbs. Very soon nodes developed upon the shafts of the tibiæ and on the frontal protuberances. The swelling in the right wrist extended, after a few weeks, over the dorsum of the hand, involving the first and second phalanges of the thumb and the three adjoining fingers. The thumb and the second and third fingers recovered their normal condition in about three months; but the integument of the index-finger gradually reddened upon its radial side and in about a year opened and discharged a little pus but no bone, then closed, leaving the motion of the finger impaired. In her twenty-eighth year a swelling appeared upon the ulnar side and dorsal surface of the left hand, which, becoming red, extended to the integument of the first and second metacarpal bones. An incision was made into this swelling, which gradually enlarged into an extensive circular ulcer. This healed slowly, leaving a fistula at the base of the metacarpal bone, which healed later on. In the year following (patient then being 29), the first phalanx of the thumb of this hand enlarged, and in a year the last phalanx also became enlarged. Coincidently the first phalanges of the first and second fingers and the whole of the third right toe became enlarged. The course in these cases was more acute and necessitated several incisions. She had been unsuccessfully treated with non-specific remedies for sixteen years previous to January, 1869. At this time her condition was as follows: The body was ill nourished, there were no cutaneous lesions, nor enlargement of lymphatics, but upon the frontal tuberosity were several nodes. The spleen was very much enlarged. The right wrist was slightly flexed and fixed, and the styloid processes were prominent. The integument over the affected points was tense and in some spots livid. The cicatrices and fistulæ were small and situated upon the dorsal surface of the hands. When a probe was passed into the fistulæ a spongy tissue was felt, but no denuded bone.

The right hand (see figure No. 6) showed the results of the destructive process, the first phalanx of the index-finger was considerably shortened and so constricted at its centre, where a small cicatrix was seen, that the

Fig. 6.

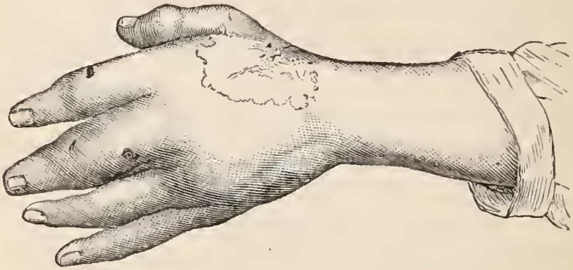


AFTER VOLKMAN.

bone appeared to be divided into two pieces, and the patient had to fix the finger with a glove, so great was the mobility. The two other phalanges were normal. The middle finger was much emaciated, the second phalanx was in a position of super-extension, while the first was slightly flexed. The bones, though unchanged in form, were atrophied, and the integument, joints, and tendons were normal.

In the left hand the lesion was in progress. On the dorsum was a large smooth movable cicatrix, adjoining a small retracted spot at the base of the first metacarpal bone, which was atrophied and produced a marked shortening of the thumb. The first phalanx of the middle finger was very much swollen and obliquely perforated by a sinus, and the bone was completely divided into two parts by an intervening newly-formed tissue. The two phalanges of the thumb and the first phalanx of the index-finger and the first phalanx of the right middle toe were swollen, but there was no sinus nor solution of the continuity of the bone. This is shown in figure 7.

Fig. 7.



AFTER VOLKMAN.

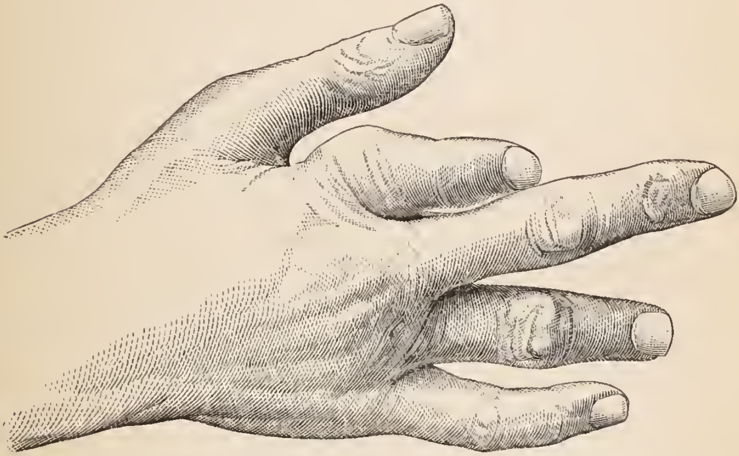
The femur, the knee, and the ankle were normal; but upon the tibiæ were numerous nodes, and the shafts of these bones were thickened.

Under the influence of chloroform an incision was made into the last diseased phalanges, and the granular deposit was scraped out. This texture was slightly vascular, soft, yellow, and dry. Pus was not found in it, but was found in the sinuses. This same material was found under the integument of the index-finger. The incision rapidly healed. In the middle finger the shortening increased, and, owing to a retention of pus, an opening was made and the interior of the metacarpo-phalangeal joint could be seen, when the synovial membrane and cartilages were found to be healthy. The swelling of the toe retrograded without local treatment. The patient came under Dr. Volkman's care in January, 1869, and had taken iodide of potassium from that time until the latter part of April, with an astonishing effect upon the osseous lesions. At this time she was seized with very profuse hemorrhage from the stomach and bowels, which resulted in death.

Although McCready's case is wanting in many of the symptoms of syphilis, from the time of contagion to the supervention of osseous lesions, its syphilitic origin cannot be doubted; as it is a well-known fact that we frequently observe late lesions, the syphilitic origin of which is certain, yet we are unable, from a variety of circumstances, to establish a consecutive history of syphilis.

McCready's Case.—Franz Webber, a tailor, born in Germany, aged 43, was admitted Nov. 4th, 1870, into Bellevue Hospital, laboring under an attack of pleurisy with effusion. This presented no unusual feature and soon subsided; but attention was attracted by a peculiar condition of the index and ring fingers of the right hand. The index-finger was deformed and shortened so that its extremity scarcely reached the joint between the first and second phalanges of the middle finger. On careful examination the first phalangeal bone was found to have, in a great measure, disappeared, not more than a fourth or fifth part of its length being left. The metacarpo-phalangeal joint had been destroyed, and a portion of the lower extremity of the metacarpal bone had been absorbed, the new and imperfect joint between it and the phalanx occupying a level a little higher than the line of the knuckles, while the joint between the first and second phalanges was on a level a little lower. The soft parts being in excess, by their bulging, contributed to increase the deformity. The metacarpo-phalangeal joint was quite movable, but the patient had lost control over it, and both flexion and extension were imperfect. In a

Fig. 8.



similar manner the second phalangeal bone of the ring finger had been reduced to about a fourth part of the length of the same bone on the left hand, the extremity of the finger scarcely reaching to the last joint of that of the middle finger. The loss of substance was confined entirely to the phalangeal bone, though the joint between the second and third phalanges was somewhat swollen and stiffened. (See fig. 8.)

There was no trace of any scar about the fingers, and the patient declared the deformity had supervened on an attack of rheumatism. The patient's father, a strong, healthy man, died after an illness of a few days, aged 50. The mother died at 46, after having been ill three months. He has six brothers and a sister living, all in good health. One brother died at 22, probably of phthisis. He had himself always enjoyed good health, until a few years back. Twenty years ago he had contracted chancre, and had afterwards twice had gonorrhœa; but he had never discovered any eruption, nor had he suffered from sore throat. About February, 1862, while engaged during a dark night on outpost-duty with the army before Vicksburg, he received a violent blow with a musket over the face, breaking the nasal bone, and knocking out a tooth. Two years afterward a piece of bone came out, leaving the peculiar flattening of the nasal arch, so often seen in syphilis. He remained in the army, doing duty, until July 4th, 1864, when he was discharged. In the latter part of the same year he was attacked with rheumatism. The knees, the ankle, and the fore and ring fingers of the right hand were very much swollen, the swelling in the fingers being greatest over the first phalanx of the index and the second of the ring finger. It was attended with some pain and tenderness, but the pain was worst in the length of the tibiæ, particularly of the right, and in the lower fifth of the right ulna and radius, and was aggravated at night. It was relieved by the iodide of potassium, but the swelling of the fingers persisted. The nocturnal pains recurred from time to time during the ensuing two years, and still sometimes trouble him, but are always relieved directly by the iodide of potassium. The swelling of the fingers diminished slightly, and then increased again at intervals of two or three months, but finally subsided after having continued, in all, over two years, leaving the fingers in their present condition. There was never any discharge, nor was the skin of the affected fingers ever broken.

Archambault's Case is, of its kind, unique. It occurred as an early lesion of hereditary syphilis. An infant, whose mother had tertiary syphilis, had mucous patches and an enlargement of the last phalanges of the fingers. Being at first regarded as false spina ventosa, it was unsuccessfully treated with anti-strumous remedies; but, when mercury was given, the mucous patches soon disappeared, and the bones were reduced to their normal size.

An analysis of these cases enables us to divide them into two classes: First, that in which the subcutaneous connective tissue as well as the fibrous structures of the articulations and the phalanges are involved; second, that in which the morbid processes begin in the periosteum and bones, and secondarily implicate the joints, and may or may not be accompanied by deposit in the subcutaneous connective tissue. But it must be remembered that this division is wholly arbitrary, and only adopted for simplicity in description, as they are in fact stages of progress of the lesion and not different varieties of it. But it can be observed upon perusal of the history of the cases that those in which the gummy deposit was developed in the connective tissue, with only slight deposit in the deeper structures, have a different clinical history from those in which the deposit is chiefly in the bones and fibrous structures. Lüche's cases and my own are types of the first variety, and those of Berg, McCready, and Volkman are types of the second variety. It will thus be seen that in the varying phases of the affection all the deeper tissues are involved, and that to complete the history it will be necessary to study the course of the lesion in all of these structures. It would be foreign to the purpose of this article to enter into very minute histological details of the neoplasm which is thus deposited; and I will briefly say that in each instance it is that immature form of connective tissue which is called gummy material.

When this tissue is proliferated amidst the connective tissue of the fingers and toes, we find that the volume of these members becomes materially increased, and that their mobility is thereby much interfered with. In some cases it seems that the deposit is strictly confined to one phalanx, in others that it shades gradually off into the next, and in others again involves all the phalanges. It is impossible to state positively why this gummy material is thus deposited, why it sometimes uniformly enlarges the whole member and in other cases that portion only corresponding to one or more phalanges; but it may be that the inflammation of the bone and joint structures tends to produce inflammation in the connective tissue which immediately surrounds them, and if this was the case we should be able to judge of the intensity of the deep-seated lesion by the greater or less swelling under the integument; but against this argument we have the clinical fact that the lesion in these cases seems to be more intense in the more superficial than in the deep tissues. It is deposited, as a rule, more copiously over the dorsal than over the palmar and plantar surfaces, Nélaton's case being the only exception; and at the metacarpo- or metatarso-phalangeal articulations, it shades abruptly off into the integument of the hand or foot, forming, as it did in my case, a perfect ridge, and, in one of Lüche's, a kind of ring. The deposit may develop slowly or quite rapidly.

When gummy tumors are developed in localities where the connective tissue is very loose and abundant, as, for instance, over the glutei or gastrocnemii muscles, at an early stage they may be recognized as small, movable, and isolable tumors, over which the integument can be easily moved, and, if followed later on in their course, they will be found to have become adherent to the derma, and perhaps to the very deep tissues, and then to be no longer isolable. But I have observed that this condition is not generally found when these tumors are formed over bony surfaces, where the integument is somewhat closely attached and the connective tissue is not so abundant. Here they are generally found, even at their commencement, to be attached to the deep layers of the corium, which cannot be moved over them; and in some instances they, from the first, appear to reach the periosteum. This condition is readily observed when the deposit occurs over the anterior or subcutaneous surface of the tibia, over the malleoli, and sometimes over the sternum. No observer has as yet found the isolable condition of the gummy tumor in the fingers and toes, but in each instance, in my case particularly, it was adherent to the corium; and I am inclined to think, from the anatomical structure of these organs, that it is generally developed as it is over the tibia, and consequently will not be found as an isolable tumor, over which the integument will freely slide. Like gummy tumors developed elsewhere (we, of course, exclude that rare form in which they are developed over the continuity of a nerve), those of the fingers and toes, as a rule, retain their normal sensation, and are not attended with pain; nor are they particularly sensitive, so that their chief inconvenience is their interference with prehension and locomotion.

Their chronicity is peculiar; for in the various cases it will be seen that they have remained several months, and sometimes shown very little amenability to treatment. This, perhaps, is partially explained by the fact of their density of structure or by their tendency to localize themselves in the dense joint-tissues and phalanges, as will be explained further on. There is also a liability to relapse, as shown by Nélaton's case, and to augment in volume, even, when for a time it has remained indolent, as was shown by one of Lüche's cases.

The usual necrotic tendency of gummy tumor seems to be wanting here; and though Nélaton and Chassaignac hint at such an occurrence, we have not a recorded case in which the phalanges have been denuded by superficial gummy destruction; whereas, though not frequent, this condition is sometimes observed over the dorsal surface of the metacarpal and metatarsal bones. Whether this is to be explained by the peculiar character of the deposit, it being here more highly organized and cellular than when developed elsewhere, or whether it is due to the preponderance of the fibrous tissues of these organs, their great vascularity, and the fact that fat vesicles are not as abundant here as in some other localities, I am unable to say; yet, considering the compactness of the deposit, and the interference to the circulation resulting thereby, and the dependent position when seated in the toes, it is wonderful that it does not produce ulcers. But, in this connection, it must be borne in mind that gummy tumor is not the sole product of late syphilitic inflammation, but that normal cells also are proliferated under the influence of the syphilitic virus. This can be particularly well observed in the fibrous tissues, as, for instance, that of the capsule of the liver. These two conditions, then, often coexist, so that a proliferation of abnormal cells and a hyperplasia of normal cells may take place in the affection under consideration; and this may offer one explanation of the fact that there is a tendency to gradual absorption rather than to molecular death. There exist, moreover, in gummy tumors two causes of decay; the one in their own mechanical obstruction and compression of the vessels; the other, the inherent tendency of a tissue of a low grade to die. But in the fingers and toes there seems to exist a peculiar reparative tendency, as evinced in the lesions of traumatism; and this may be cited as another reason why they rarely become very much disorganized by syphilitic inflammations.

All the recorded cases in which the morbid process commenced in the subcutaneous connective tissue have presented a violaceous color of the integument, and have been, to the touch, tense and resistant. This state, as said before, is probably owing to the density of the gummy material; but Chassaignac refers to the probability of the deposit being colloid and semi-diffluent, in which case the capillary compression would be much less, and the violaceous appearance of the integument would not be well marked, if at all present. In this diffluent form of deposit, a soft, yielding sensation, approaching in extreme cases almost to a sense of fluctuation, would be felt instead of firm resistance.

The lividity of the integument decreases in proportion with the absorption of the gummy deposit, and in my case remained nearly three months. It is somewhat singular that the tubercular syphilide on the forehead of my patient, which involved the whole thickness of the derma up to its epidermal layer, and which antedated the lesion of the toe about four months, should be of the colloid variety, soft to the touch and very amenable to treatment, and should be followed by a firm deposit of an analogous material in the toe. But we have as yet no clinical fact to prove that the colloid variety of gummy tumor occurs in the fingers and the toes; and although Chassaignac admitted its probability, he reasoned, I think, upon the fact of its occurrence elsewhere, and therefore assumed its liability to occur here.

The nails seem, in general, to escape any synchronous depositive or destructive change. In my own case, it is true, a transverse furrow was observed some months after the commencement of the lesion, upon that portion of the nail which was in process of formation during the progressing period of the gummy deposit, but this was a simple result of the impairment of the nutrition of the nail, and probably the nutrition of the tegumentary structures was also slightly interfered with, though we have no means of judging of it. The same linear atrophy of the nail is frequently observed after adynamic diseases. We may, therefore, consider it the rule, that in this affection the integument and its modification, the nails, escape any primary implication. Lancereaux remarks that an osteitis or periostitis of the last phalanx may produce destructive changes in the nails, but we have no clinical facts to verify this statement, and observation has shown that when in the tertiary period the nail is destroyed, it is generally by ulcerative tubercular syphilides involving the matrix and sulci of the nail, and it has also shown that we cannot demonstrate an osseous lesion. In most of the cases of syphilitic dactylitis the last phalanx is not enlarged, and in those cases in which it is enlarged, the tissues which underlie and surround the nail are not swollen out of proportion to the rest of the organ, nor are they the seat of more active inflammation. In one of Lüche's cases slight ulceration occurred in the interdigital space, but this was merely produced by mechanical stretching of the integument.

Having now studied the course of the lesion in the connective tissue, its general characters, and the subjective and objective symptoms produced by it, we are prepared to follow its progress in the fibrous structures of the joints and in the bones. Coincidently with, or soon after, the deposit in the connective tissue, we notice a thickening of one or more phalanges and of the articular capsule, generally but not invariably of the first phalangeal joint. As this thickening of the articular capsule exists in both forms of dactylitis, we will study its course here, and then only incidentally refer to it, when we come to consider the second variety. Pathological observation has fully demonstrated the existence of gummy material in the ligaments, therefore we are warranted in assuming that this enlargement is due to this cause. As a rule, however, it is not copiously deposited, but is disseminated in small portions rather than in large masses through the tissue, and from this distribution it happens that when the material is finally absorbed, or extruded, the whole ligament is not destroyed, but merely those portions which had been infiltrated. If these structures could be viewed by the naked eye after this process of absorption has taken place, they would be seen to present a honey-comb appearance, the minute holes corresponding to the former seat of gummy deposit. A very similar appearance is presented by bone under the same conditions. This perforated condition of the ligaments, under favorable circumstances, is very soon repaired by a deposit of normal fibrous tissue, which may, as it becomes older, have a tendency to contract, and thus fit more tightly to the bones beneath. The course of this lesion in my own and in Lüche's and Berg's cases shows that in general, although these structures are considerably involved, the final result is not very serious. During its progressive stage it produces a decided impairment of motion of these members, rendering them sometimes immobile: in others preternaturally mobile, so much so that the joint-structures are flaccid, and though the fingers or toes will, by slight force, bend in any direction, they are not at all responsive to volition. Whereas, in its final stage, it may leave the joint either nearly normal or in an impaired condition; as a result of which we see that the phalanges of the fingers and toes are sometimes in the position of superflexion, in others in superextension, or that both conditions are combined in the same members. This is admirably shown by Volkman's case (see fig. 6) and by my own.

This thickened condition and impaired nutrition of the ligaments reacts sometimes upon the tissues lining them, and very often upon that which indirectly derives its nourishment from them: I refer to the synovial membrane and the articular cartilage. In each of the cases in which the deposit has been chiefly subintegumentary there has been evidence of the implication of the articular cartilage, and in none of these cases, which include both of Lüche's cases and my own, has the synovial membrane seemed to participate, as evidenced by an effusion, whereas in Berg's case, which belongs to the second class, and in which the lesion was chiefly osseous, a synovitis was observed. It appears somewhat remarkable that in this first variety of dactylitis, although there is very considerable articular trouble, there should not be an effusion into the joint, and it remains for future observation to determine whether or not this may occur.

We find it distinctly stated by Lüche that he observed a crepitation, more or less rude in character, in his cases, and it is to be regretted that he does not state the date of the appearance of this symptom. I carefully sought for it from my first examination, and observed it for the first time in the third month of the articular and periarticular trouble. One reliable observation, however, does not warrant an opinion as to the date of development of this symptom. This sound is undoubtedly due to some change in the articular lamellæ of the cartilage, and it is interesting to determine as near as possible what this change is or to what it is due. As we are warranted in assuming that a gummy deposit similar to that of the connective tissue existed in the ligaments, the question arises whether this also pervaded the cartilage. This latter tissue, though non-vascular, we know to be liable to inflammation and its consequent changes, but we have no facts proving it to be the seat of the proliferation of gummy tumors; and various pathological facts, which will be brought out further on, warrant me in concluding that the changes in the cartilage are of a secondary nature, dependent upon those of the articular capsule. Besides these facts, this opinion has the support of anatomical evidence, for the articular lamella of cartilage is nourished by plasma, partly from the vessels of the synovial membrane and partly from those of the ligaments, and does not receive any plasma through the bony lamella underneath; therefore it follows, that any obstruction of the vascularity of the supplying parts interferes with the nourishment of the cartilage, which is a tissue of low grade and readily susceptible of morbid change. Without denying, then, that gummy tumor may occur in articular cartilage (though in the gummy lesions of the trachea and costal cartilage, the deposit is generally between the perichondrium and the cartilage), the crepitation of these joints may be rationally explained by the existence of an impaired nutrition, which produces more or less erosion of this tissue. In my case the changes were slight and temporary, but in one of Lüche's cases the periarticular deposit softened and was extruded, and the crepitation is described as being rude. We may then conclude that in this affection the articular cartilage undergoes more or less profound nutritional changes, probably in proportion to the extent of peripheral lesion, and that it is capable under favorable circumstances of regeneration to a certain extent.

The synovial sheaths of the tendons have been shown, by the observations of Verneuil[1] and Fournier,[2] to be the seat of inflammation and dropsy in secondary syphilis; but they have not as yet been found to be the seat of gummy deposit, although Van Oordt[3] cites a case of gummy tumor of the third extensor tendon which was seated over the middle of the metacarpal bone.

This variety of dactylitis syphilitica, then, consists in a copious gummy deposit, both in the connective tissue and the fibrous structures of the joints, with a much less copious deposit in the phalanges. It may be developed in a single finger or toe, or it may involve more than one of either of these members, and may even involve one or more of each at the same time. It usually attacks but one joint, and in all but one of the recorded cases—in which it occurred in the second—it has been the first phalangeal joint. The swelling may thus be confined to one phalanx, it may shade off into or wholly involve the second, or may uniformly enlarge the whole of the finger or the toe. As will be seen further on, this variety differs from the second, in the fact that the principal deposit is in the connective and fibrous tissues, whereas in the latter the principal seat of the morbid process is in some portion of the bone. The clinical facts which are now in our possession do not allow us to state decidedly that the lesion of the bone only progresses to a very moderate degree, as shown by a not very extensive enlargement of those structures in Lüche's case and in my own. But it is to be fully taken into account that in all of these three cases an active antisyphilitic treatment was quite early adopted, and this perhaps materially held in check the lesion in the bone, whereas, had it not been adopted, the bone-enlargement might have become as formidable as in the cases of the second variety. This lesion generally coexists with grave lesions of the bones, joints, integument, and viscera, and is always the expression of a profound syphilitic dyscrasia. It is generally observed in patients who are past middle age, though in two of Erlack's cases it occurred in young persons. In four out of the seven cases it was observed in men. We are unable to definitely fix its period of evolution, but, in the present state of our knowledge, we may state that it may occur both early and late in the tertiary period.

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[1] *Des Tumeurs Gommeuses, Thèse de Paris*, pp. 44 and 45. 1859.

[2] "De l'hydropisie des gaînes tendineuses des extenseurs des doigts dans la Syphilis Secondaire."—*Gazette Hebdomadaire*, No. 39, 1868.

[3] "Note sur les lésions des gaînes tendineuses dans la Syphilis Secondaire."—*Gazette Hebdomadaire*, No. 41, 1868.

The deformities produced are not of a very serious character, and can be divided into two classes: first, those of the progressive and stationary period of the lesion; second, those due to the destructive changes in the joint-structures, both of which are shown by my own and Lüche's cases.

We now come to the second variety of dactylitis syphilitica.

In this form the inflammatory action may begin between the periosteum and the bone, being then a specific periostitis; or it may commence in the cancellous tissue around the medulla, and is then an osteo-myelitis. The product of these specific processes is gummy material, which causes the enlargement of the bones. The swelling of the fingers and toes in this variety is very considerable, so that in Berg's case the circumference of a finger at the first phalanx was nearly five inches. As the principal lesion is in the bone and joint-structures and only exceptionally under the integument, the enlargement is nearly limited to the phalanges, which are involved. The recorded cases show us that any, or all, of these phalanges may be attacked by this process: thus, in Berg's case it was the first, in Volkman's it was, respectively, the first and second, and all three at the same time; in McCready's, the first of one finger and the second of another; and finally, in Archambault's, it was all of the last phalanges. According to Volkman's case, the process may be slow in development, or it may run an acute course, as shown by both Volkman's and Berg's cases. In the thumb of Volkman's patient the first phalanx slowly enlarged, and thus remained a year, before the second was involved, whereas, in the same patient, other fingers swelled so acutely that it was necessary to make incisions into them. So we may conclude that the acute and chronic course may exist in the same patient.

The integument becomes very much stretched by the pressure from within, and the surface-markings and articular furrows in it are effaced, and it can only with difficulty be pinched between the fingers, and it may be so very tense that it can scarcely be moved over the parts beneath. Its color varies from a pink to a decided red, and when the lesion of the bone has been very acute, it may become very much tumefied and sensitive; but this condition is only temporary. In this variety, as in the first, there is no concomitant lesion of the nail, even when the last phalanx is involved. As has been said before, the gummy deposit does not, as a rule, exist under the skin in this variety, though in one of the fingers of Volkman's patient, upon incision, it was found there in very small quantity.

As I have said before, there are two foci of this specific bone-inflammation, the one more superficial, the other deeply seated. In Volkman's case it is certain that the process commenced between the bone and the periosteum, for when this membrane was incised, during life, gummy material was scraped from beneath it.

Volkman gives the appearances presented by the tibia, after death, and we may presume that precisely similar changes had taken place in the fingers. The periosteum was loosely attached and readily stripped off, and between it and the bone a small cheesy mass was found. The microscope showed the exterior layers of the periosteum to be normal. Inside of this was a layer of fusiform cells which, further inward, became more numerous, smaller, and rounder, while still further towards the bone they lost their cellular character, and finally presented the appearance of fatty detritus. This cheesy mass was situated immediately upon the bone, projecting by tubular prolongations into the Haversian canals, while upon the bone new periosteum was forming.

These same changes, which Virchow[1] describes as the dry caries of syphilis, and which are generally observed upon the cranium and tibia, existed in the fingers of Volkman's patient. After the deposit of the gummy material, no inflammatory action is excited, but it slowly produces the death of the bone which it infiltrates, and is finally absorbed, leaving a loss of substance which is not again replaced, the whole process being unattended with suppuration.

The swelling, when originally developed, is softer in the acute than in the chronic form, and this is probably due to the tissue which is thus rapidly proliferated being of a colloid character. This variety, of course, produces much deformity, and has a tendency to destructive change; whereas, in the chronic form the swelling is firmer and there is a tendency to remain indolent and infiltrate the bone, and finally be absorbed rather than to break down and to be eliminated.

The clinical details of Berg's case prove that when the lesion begins as an osteomyelitis its course at the commencement may be quite rapid, so that very soon the finger becomes greatly enlarged. The swelling of the bone seems to have been perfectly smooth, and surrounded by a wall composed of compact tissue and periosteum. This latter fact lends weight to the view that the lesion was in reality developed deep in the cancellous tissue, and that coincidently with the rapid proliferation of gummy material, the compact structure and periosteum gradually became expanded, so that they fully accommodated themselves to the very considerably increased pressure from within. But, whether owing to the low organization of the gummy material or to the mechanical effect of its presence, it finally softened, and the investing wall became thinned, and, upon opening, a fluid of the consistency of gummy débris escaped. The facts developed by McCready's case render it probable that its lesion also began as an osteomyelitis, and my friend Dr. Bumstead, who has seen the case, expresses the same opinion. But whether it began as a periostitis or an osteomyelitis, the important clinical fact is brought out by it, that, even if such an extensive gummy deposit is formed in bone, it may finally undergo fatty change and be absorbed without softening and being thrown out, so that from all these cases we may infer that both of the conditions of absorption or breaking down may obtain in this lesion. The same remarks which have been previously made as to the varying degrees of maturity of the gummy material, and the consequent tendency to absorption or liquefaction, apply also to this condition. The liquid formed by the degeneration of gummy tumors is a viscid yellowish fluid, containing cheesy flocculi, but no pus. An absence of pus is peculiar to the liquid formed by the degeneration of any gummy deposit, and this as well as its other characteristics are important, as diagnostic points. Microscopical examination of this fluid shows amorphous granular matter, with, sometimes, a few connective-tissue cells, but never, in an unirritated condition, pus-corpuscles. These latter bodies may be found after the gummy ulcer or sinus has been exposed to the air, or has been treated by irritant applications, but never in the original process of softening. The color of the fluid varies from a yellow to a brown; its consistence is also variable, being thin when drawn from a joint and mixed with effusion, and thick and inspissated when formed by the degeneration of connective tissue or bone, and in the latter form it may contain minute bony granules. This same description would apply to the degeneration of the gummy deposit under the integument, should that change possibly occur. The fistulous openings present interesting points also, as showing no tendency to enlarge nor to become thick, bluish, and everted at their orifice,—a condition very frequently observed in the so-called strumous sinuses near joints,—finally, spontaneous closure. But in Volkman's case one of the incisions ulcerated and became quite extensive, and upon healing left a cicatrix, so that we may infer that both of these conditions may obtain.

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[1] *Pathologie des Tumeurs* (Trad. Franç.), p. 394. Paris, 1869.

The fibrous structures of the joints may or may not participate in the morbid process, but as the changes are similar to those occurring in the first variety, it is needless to repeat the description. The articular cartilage also may or may not be profoundly involved, and its altered condition may be in this variety the result of two causes; first, the gummy lesion in the ligaments; second, the same lesion in the underlying bone. In Volkman's case the ligaments were normal, and the trouble in the cartilage was secondary to that of the bone. He states that the articular cartilage had lost its polish and was of a yellowish color. Upon its surface, particularly at the periphery, there were some well-defined, cleanly-cut erosions. Some of them had healed and been replaced by cicatricial tissue, whereas others had a dense sclerotic bone for their bases, while in other spots the cartilage was thin and translucent. The changes in the cartilage were undoubtedly due to disease of the subjacent bone, and not to impaired nutrition from lesion in the joint-capsule. In fact, the process was analogous to that which takes place in fungoid arthritis from osteitis. Volkman mentions having in his museum the tibia of a syphilitic woman, the whole length of which was the seat of gummy deposit. The shaft of this bone was very light and fragile, for the gummy masses had been entirely absorbed, leaving it of a spongy texture. The articular cartilage was for the most part intact, but there were perforations in it which communicated with the bone-tissue by means of sinuses, which in the recent state contained gummy material.

Besides the articular cartilage, the synovial membrane may suffer from morbid changes. In Berg's case, there was a copious effusion into the joint, which probably was caused by inflammatory action in the synovial membrane, set up by gummy deposit in its underlying connective tissue. Richet[1] was the first to describe a thickening of the synovial membrane of the knee, which is accompanied by effusion of an intermittent character and a dull pain, not increased on motion, but worse at night. Lancereaux[2] confirmed Richet's observation by finding, after death, gummy material in the ligaments and beneath the synovial membrane, which lesion, during life, had been attended with the same symptoms. In Berg's case a similar process involved the phalangeal joint, but pain was not present, so that, while one case does not prove that pain may not be present, the evidence of analogy would suggest the fact that it may.

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[1] "De la tumeur blanche." *Mémoires de l'Académie de Médecine*, vol. 17, pp. 249, 250, 251. 1853.

[2] *Traité historique et pratique de la Syphilis*, page 251. Paris, 1866.

The involution of the gummy enlargements of bone is accomplished, as has been previously stated, either by an interstitial absorption, in which there is no lesion of continuity of the overlying soft parts, or by a softening of the deposit and its discharge through a sinus which it forms. As has been said before, even when softening occurs, it is not usually accompanied by a formation of pus. The final results are, that certain portions of the shaft may be wholly absorbed, or the whole shaft may be slightly attenuated. This local absorption completely divided a phalanx in Volkman's patient into two portions, and nearly the whole of a phalanx of one finger, and the whole of a phalanx, its joint, and a portion of the metacarpal bone of another finger in McCready's case. The shafts of the bones may also be rendered light and fragile, or local or general eburnation may take place in them. When the phalanges are divided into two portions, or when the approximative ends of two bones are absorbed, a ligamentous band of connective tissue is formed, which unites them, and in the future serves as a joint. The fact that a whole joint is absorbed, certainly proves that it must previously have been infiltrated with the gummy material. The shortening of the fingers or toes is quite extensive, as Volkman and McCready's cases show, and this may also result from destruction of a part of the metacarpal bone, as well as of the phalanx. A finger with one of these false joints loses its power of grasp, and its function, though not wholly abolished, is much impaired. When very extensive shortening has taken place in a finger, it is remarkable how the integument contracts and adapts itself to the altered condition; it seems that nearly all of the redundant tissue disappears, and that the superficial tissues finally adapt themselves to the decrease. This is very beneficial in giving steadiness and solidity to the false joint. In McCready's case, though very considerable shortening was produced, there was not very much wrinkling of the skin. It is certainly very remarkable that there should be such a small amount, or an entire absence, of pain accompanying such chronic and profound osseous and articular changes. In all of the recorded cases, the sheaths of the tendons have not been involved.

The *diagnosis* of these lesions is of the utmost importance, for when their syphilitic origin is recognized an appropriate treatment may prevent serious destruction, and at least materially lessen the ultimate deformities. The subcutaneous variety of dactylitis syphilitica might, in its early stage, be mistaken for paronychia or the subperiosteal and subcutaneous inflammation termed whitlow; but the absence of acute inflammatory symptoms, pain especially, would readily eliminate these affections. When the lesion occurs in the great toe it might be regarded as gout, but here, again, the absence of acute invasion and pain would soon point out the error. In the instances in which the lesion is developed in several fingers and toes, particularly when accompanied by trouble in the large joints, it might be looked upon as rheumatoid arthritis, especially as the two lesions are unaccompanied by febrile reaction. But rheumatoid arthritis is essentially a lesion of the joint-structure, not involving the integument. It attacks the metacarpo-phalangeal (and rarely the metatarso-phalangeal) articulation much more frequently than those of the phalanges, involving, in most instances, the sheaths of the tendons, generally the flexors, leaving a deposit of small tophaceous nodules along the course. Its deformity commences with the inception of the lesion, and has a tendency to draw the fingers to the ulnar side of the hand, and to flex and extend them in various positions, and moreover minute tophi are to be found coincidently in the cartilages of the ear. Besides these symptoms the crepitation of rheumatoid arthritis is of a dry, harsh character, and is also observed in the tendinous sheaths, and commences quite early in the affection. In the syphilitic joint-lesion there is generally a history or concomitant symptoms of syphilis; the swelling does not usually involve as many joints, is mostly observed upon the dorsal surface, and rarely if ever upon the palmar surface, or in the sheaths of the flexor tendons; the swelling is at first subcutaneous, and the joint-lesion is usually discovered afterwards; and the crepitation, which is not heard early, is of a softer character.

Enchondroma of the fingers might possibly but rarely be mistaken for dactylitis syphilitica, but with care they can easily be differentiated, as the former involves generally one, and especially the palmar, surface of the bone, increases very slowly, and presents a hard, well-defined tumor. The same remarks apply to exostoses.

The second form of dactylitis syphilitica might perhaps be mistaken for periostitis or the so-called strumous disease of bone. From the former it would be known by its comparative painlessness, its subacute course, and perhaps by the coincidence of syphilitic lesions of larger joints, with their well-marked symptoms as already detailed, as well as a history of syphilis, or the presence of tegumentary lesions of syphilis upon the body. The tendency of the so-called strumous inflammation to localize itself in bone rich in cancellous tissue, particularly those of the carpus and tarsus, and the expanded extremities of long bones, renders it probable that it rarely if ever attacks the phalanges.

The *prognosis* of this affection of the fingers and toes depends entirely upon the accuracy of the diagnosis, and to a certain extent upon the period at which it is recognized, and in the event of its being correct, and as a consequence an appropriate treatment being instituted, it may be stated to be good, for the final impairment of the members is generally not so great as to cause utter uselessness. But if the origin of the lesion is not recognized, the chronic enlargement of the bone, the chronic hydrarthrosis with crepitation, or the latter symptom combined with chronic capsular thickening, might lead the unwary surgeon to pronounce an unfavorable prognosis, and perhaps to institute unnecessary operative procedure. The *treatment* is that of late syphilis, the use of iodide of potassium either alone or combined with a mercurial. The combination always answers best in cases where there is a co-existence of tegumentary lesions, but when these are strictly osseous and ligamentous, our chief reliance is upon the iodide, and we can, if that is inefficient, add the mercury. When the parts are very much distended, a minute incision may be necessary.

OBSERVATIONS ON TERTIARY DISEASE OF THE GENITO-URINARY APPARATUS.

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Among the varied manifestations of the later stages of syphilitic disease there are none more interesting and worthy of investigation and thoughtful consideration than the lesions of the genito-urinary organs. The process of syphilitic evolution, although characterized by a certain predilection for certain tissues, is not confined to particular organs or structures; the entire economy, in varying degrees, being susceptible to its malign influence. The genito-urinary apparatus is not ordinarily obnoxious to the constitutional virus, yet changes in these organs are sufficiently common, the more important of which is now the object of our study.

Syphilitic affections of the testicles have from an early period engaged the attention of observers, and valuable contributions to our knowledge of the pathology of these lesions have been made by Cooper and Dupuytren, but more especially by Ricord, Curling, and Gosselin. These lesions occur in two forms: the infiltrated and the gummous; often separate, sometimes combined, yet distinct and unlike in development and progress. Interstitial orchitis may be limited to a portion of the testicle, or extend to the whole of the organ, or it may involve both. In the first stage there is vascular hyperæmia followed by the development of conjunctive tissue; bands of a whitish aponeurotic appearance, springing from the albugineous tunic, and passing between the seminiferous tubules, compress them and divide them one from the other; these tubules then become atrophied, undergo fatty degeneration, and are no longer capable of fulfilling their function. In other words, the testicle has undergone a fibro-fatty metamorphosis. At an early stage of the morbid process the testicle is hypertrophied, but, contraction of this interstitial tissue taking place somewhat later, the organ is correspondingly reduced in size.

Gummy orchitis often accompanies the interstitial form, but is as frequently met with independently. It occurs as one or more tumors, springing individually or in a conglomerated mass from various points. They have a firm, unyielding consistence, are of a murky-white color, and are inclosed in a firm, fibrous investing membrane. The body of the testicle alone may be concerned, or the diseased action may extend to the spermatic cord as well. This morbid product may undergo a softening, break down, and reach the external surface of the scrotum, there taking the form of a fungus—this fungus presenting itself as a tumor of varying dimensions, symmetrical in form, and with a granular surface secreting pus freely, the surrounding integumental tissue being usually mobile and apparently sound. The more usual termination of gummous orchitis, however, is in resolution, but usually not until the testicular apparatus has undergone changes and modifications more or less important.

The development of syphilitic orchitis is generally gradual and unaccompanied by acute symptoms. Its progress is insidious. There is rarely any pain, the patient's attention being first directed to the organ by a feeling of weight and a sense of dragging, or by its increased volume. When there is pain, it is of a dull, gnawing character, of no great severity, subject to nocturnal exacerbations, and increased by pressure. Should the tunica vaginalis be involved, hydrocele accompanies the earlier stages of the disease, but is afterwards absorbed. The erotic sense suffers impairment or is totally abolished in cases where both organs are affected ; erections are difficult, or impossible ; and the secretion of semen is lessened or may be absent.

The diagnosis of syphilitic orchitis, in the absence of a clear history, is sometimes difficult. It may be confounded with chronic non-specific orchitis, an affection the existence of which eminent authorities question—a doubt, however, to which I cannot subscribe. We should scarcely mistake cancer for syphilitic orchitis; the development of the tumor, its physical characteristics, the severity and character of the pain, and the history of the case, being sufficient to distinguish them. Acute traumatic orchitis will be recognized by the rapid swelling, the pain, heat, and redness; while gonorrhœal orchitis will be indicated by the history of a urethral discharge, pain in micturition, and the usual train of symptoms of a urethritis. Tubercular disease of the testicle is usually developed in the epididymis; it softens readily, involves the contiguous tissues, is closely adherent to the skin, is prone to the development of abscesses, and the formation of fistulæ; a history distinct from that of syphilitic sarcocele.

Tertiary syphilis may be said never to invade the epididymis, though this gland does not enjoy the same immunity from the secondary manifestations. Dron (*Archives Gén. de Méd.*, 1863. "De l'Epididymite") was the first to point this out, establishing the fact that the epididymis undergoes morbid changes independent of those of the testicle, and developed at a period after primary infection corresponding to the appearance of the early superficial eruptions.

Specific orchopathy sometimes declares itself within twelve months after the initial lesion, oftener four or ten years subsequently to the inception of the constitutional taint. It is tardy in progress, undergoing various changes in its evolution. The prognosis is usually favorable, the functions of the organ being restored by proper treatment if begun previously to the atrophy and consequent destruction of the spermatic ducts.

Syphilitic affections of the prostate are of exceeding rarity; the only author who has attempted to assign to this origin tumors of this gland being Petit (*Œuvres Complètes*, Paris, 1844), and his evidence is almost invalidated, from his confounding gonorrhœa with syphilis. The vas deferens is sometimes implicated by extension of the disease from the testicle, but it seldom or never is directly affected by the syphilitic virus. There is no case upon record of the vesiculæ seminales being specifically affected.

Tertiary lesions of the urethra, bladder, and ureters, are of great rarity, but, with the exception of the last named, have been observed by various authorities. Virchow describes them in the urethra as strongly analogous to the affections of the larynx, and thinks them of more common occurrence than is generally supposed. These morbid changes occur as ulcerations and cicatrices involving the mucous and submucous tissues, and extending over a certain extent of the urethral canal, sometimes as far back as the bladder. The corpora cavernosa occasionally have developed in their substance genuine tumors, which pursue their usual course of painless development; the result of the lesion being the blocking up of the erectile tissue of the organ, thus rendering an erection impossible, or, if but one corpus cavernosum be involved, permitting the afflux of blood to but one half, an imperfect congestion and strongly incurvated condition of the organ resulting. This gummous product may remain quiescent, or it may soften as in other situations, or it may be absorbed with or without the aid of remedial measures. I have never found a lesion of the bladder undoubtedly attributable to tertiary syphilis, but several authorities seem to have traced to this origin morbid structural changes which they have noted upon the surface and within the substance of the vesical walls; one observer recording a case (*Gazette Médicale*, p. 92, 1849) where the mucous membrane was the seat of numerous tumors possessing the same characteristics as syphilitic tubercles when found in analogous structures elsewhere. It is within a comparatively recent period that visceral syphilis has received attentive study, and it was not until 1849, when Rayer published his *Traité des Maladies des Reins*, that the question of the syphilitic origin of lesions of the kidneys was discussed. To him, therefore, is due the honor of being the pioneer in this field of investigation. Before the publication of Rayer's observations, certain morbid conditions of the kidneys had been noted in connection with syphilitic disease, but they had been thought to be due to the influence of mercury, and not to that of a specific virus. At the present day the influence of constitutional syphilis in the production of albuminous nephritis is, I think, generally admitted, though, as may be readily understood, the question as to whether the renal affection has been brought about through the agency of causes, direct and indirect, independent of a syphilitic cachexia, or whether it be due solely to the venereal taint, is one the answer to which will in all cases be difficult and embarrassing, and in some impossible. Our knowledge of syphilitic nephritis is mainly confined to pathological conditions observed upon post-mortem examination, the symptoms being obscure and uncertain. The lesions thus studied have been found to occur in two forms, the diffused or inflammatory interstitial, and the circumscribed or gummous. In interstitial nephritis the kidneys undergo general or partial atrophy; their surface is nodulated, with a thickened and closely adherent capsule; they are of a firmer consistence than natural, and the whole medullary substance has a yellowish and lardaceous appearance. There is also a change in the stroma of the organ, with a formation of new conjunctive tissue, which compresses the malpighian bodies, inducing their atrophy. Sometimes amyloid or cirrhose degeneration accompanies the condition above referred to, and prevents any diminution in the volume of the affected kidneys (vid. *Gaz. hebd. de Méd. et de Chirurg.*, p. 524, 1865).

Gummous nephritis is much less common than the inflammatory interstitial. It presents itself in the form of small, circumscribed tumors of firm consistence, drab-colored, and occurring within the cortical substance and upon the surface of the affected organs. Under the microscope these tumors present the usual elements of gummata. In seeking their presence, it is possible to confound tubercles and hemorrhagic infarctus with them, from which, however, they are in the former case to be distinguished by the absence of tubercles in the lung, and, in the latter case, by means of the microscope, the infarctus showing the elements of the renal tissue, and blood-corpuscles undergoing retrograde metamorphosis; this sufficiently distinguishing them from syphilitic products.

The symptoms of syphilitic nephritis do not differ from the ordinary non-specific disease—the diffused form, however, causing greater functional derangement than the gummous. It has been remarked by Bozin, however, that the œdema or anasarca, usually accompanying chronic renal disease, is less marked and more frequently absent where the origin is syphilitic than where the disease springs from another source (Lancereaux's "*Etudes sur les lésions viscérales susceptibles d'être rattachées à la syphilis constitutionelle;*" *Gaz. hebd.*, 1864). The progress of syphilitic renal lesions is generally tardy, and their most usual termination death. Indeed, the prognosis under the most favorable circumstances is very grave; treatment, however assiduous, effecting but little amelioration in the patient's condition. Lancereaux (*loc. cit.*) mentions a case where marked improvement followed the use of the iodide of potassium in thirty-grain doses, and Rayer ("*Traité des Maladies des Reins*") gives one case where much benefit was derived from corrosive sublimate with sarsaparilla, Sédillot's pills, and extract of opium, but there is not, to my knowledge, upon record a single recovery from fully established syphilitic albuminuria. Albuminuria may sometimes be found in secondary syphilis (*Journal de Méd. de Lyon*, February, 1867), and here the prognosis is much more favorable, the disease being more amenable to treatment and less likely to terminate fatally than in recovery.

The treatment of tertiary disease of the genito-urinary system, and visceral syphilis in general, is conducted upon the same broad principles governing us in the treatment of lesions of this stage in other structures, the only difference being that larger and more decided doses are necessary. No time should be lost in attempts to combat the cachexia by general treatment before resorting to specifics; some of the preparations of iodine—preferably the iodide of potassium—should at once be given, and with this the corrosive chloride of mercury may often be most advantageously combined. The active agent at work is the syphilitic virus, and checking its ravages before irreparable mischief is done is the main object. After the system is under the influence of the drug, by tonics, stimulants, nutritious food, and attention to the patient's general hygienic condition, we may endeavor to further the action of the medicine, and add to the tone and increase the vigor of the system. In some cases, however, it will be found that the iodide of potassium, instead of exerting its accustomed influence, is of no avail whatever. In these rare instances I have derived signal advantages from the entire suspension of this agent, and the administration in full doses of cod-liver oil until an impression was made upon the general nutrition, when a return to the iodide was followed by the happiest results. Iodide of potassium cannot be said to affect the diathesis—it but destroys the manifestations ; we must, therefore, expect to meet with relapses. No positive rule can be laid down as to how long the administration of this agent is desirable. The general condition of the patient, the gravity of the local determination, the effect of the medicine, are all circumstances to be taken into consideration in arriving at a conclusion.

The foregoing remarks on tertiary affections of the genito-urinary apparatus were collated by my friend and pupil, the late Hermann W. Newcomb.

ON VACCINO-SYPHILITIC INOCULATION.[1]

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We have seen that the analogical arguments against the possibility of syphilis being conveyed by vaccination with unmixed lymph, even if taken from a syphilitic subject, are so very strong as to require for the irrefutation unexceptionable positive evidence that such conveyance has taken place. A careful consideration of the clinical facts on record has shown us that no such evidence exists. But our account cannot be considered complete until we have given the results obtained by experiments. These experiments, while they must be looked upon as for the most part utterly unjustifiable, and although, from the nature of the case, their evidence must of necessity be only negative, accord perfectly with what we have deduced from analogy and from clinical observation.

Fridinger relates[2] that he vaccinated three children affected with congenital syphilis, and that one of these children furnished vaccine for further inoculations, in which, so far as our knowledge goes, syphilis was not communicated.

Sébastian[3] vaccinated six children with vaccine from a syphilitic child, taking care to avoid admixture of the vaccinifer's blood. In these six children nothing resulted but normal vaccinia. He also vaccinated a syphilitic child, and from the resulting vesicle vaccinated himself, making two inoculations, one of which resulted in a typical vesicle, from which he vaccinated two children. No sign of syphilis showed itself in either M. Sébastian or the two children.

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[1] Continued from page 315 of Vol. I.

[2] In a memoir published at Vienna, in 1855, and quoted by Viennois, *De la Syphilis Vaccinale*, p. 227.

[3] Quoted by Viennois, *op. cit.*, p. 51.

Dr. Densel[1] vaccinated thirteen people at a sitting from a subject who, when it was too late, was discovered to be syphilitic. The result of these vaccinations was watched with a great deal of anxiety, but syphilis was not transmitted to any of these thirteen individuals. For his own satisfaction Densel inoculated himself with vaccine taken from a subject known to be syphilitic. The vaccinial vesicles followed a regular development, without communicating syphilis to the experimenter.

Bidart[2] vaccinated a child six months old, and from its arm four other children. A few days afterwards the vaccinifer was found to be suffering from syphilis, but frequent examination during the next six months failed to discover any manifestation of syphilis in the four vaccinated children. Emboldened by this result, Bidart afterwards vaccinated a child suffering from well-marked congenital syphilis, and from this child's arm he vaccinated two other children, who, at the end of five months, remained free from syphilis, and in good health.

Similar results were obtained in separate experiments by the Medical Society of Paris,[3] and by Bousquet,[4] Heim,[5] Cullérier,[6] and Girault.[7]

M. Montain[8] relates, as having occurred under his own observation, the vaccination of thirty children from a syphilitic subject, in none of whom was syphilis manifested.

Dr. Schreier[9] vaccinated two children from a syphilitic subject, without conveying syphilitic disease.

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[1] *Arch. Gén. de Méd.*, Sept. 1867, p. 361.

[2] *Jour. de Méd. et de Chir. Prat.*, 1831, Vol. II, p. 85, quoted by Viennois, *op. cit.*, pp. 222 and 241.

[3] Auspitz, *op. cit.*

[4] *Sur le Cow-Pox découvert à Passy.*

[5] *Historisch-Kritische Darstellung der Pockenseuchen*, etc.

[6] *Gaz. des Hôpitaux*, 25, 1862.

[7] *L'Union Méd.*, *Apr.* 15, 1862. All of these authorities are quoted by Auspitz, *op. cit.*

[8] *Journal de Médecine de Lyon*, July 17, 1848, quoted by Viennois, *op. cit.*, p. 243.

[9] *Journal Médicale de Munich*, quoted by Viennois, *op. cit.*, p. 243; *Henke's Zeitschr.*, f. *Staatsarzneikunde*, 1856, quoted by Auspitz, *op. cit.*

Dr. Taupin,[1] formerly *interne* of the *Hôpital des Enfants*, vaccinated 2,000 children, affected with various sorts of diseases, among others syphilis, and never *remarked* the conveyance of syphilis. The method which he adopted was, to vaccinate in the centre of a syphilitic sore, and then prosecute his experiments with lymph from the resulting vesicle (*sic*).

Heim (quoted by Steinbrenner) states that he vaccinated some young ladies with virus taken from officers who had syphilis, without communicating the disease to the former. He also vaccinated three children with virus from a child presenting symptoms of constitutional syphilis, without occasioning the slightest untoward manifestation. Steinbrenner adds, that "neither in military revaccinations, nor in those done in civil practice, in which certainly the virus has often been taken from persons afflicted with various virulent diseases, has any vaccinator in the whole kingdom ever adduced a single case of transmission of any other disease by means of vaccination."

Bousquet[2] vaccinated with lymph from two children known to be syphilitic, and never conveyed any other disease than vaccinia. M. Cullérier[3] declares that he has not only vaccinated syphilitic children without ever seeing the vaccinia in any way modified by the syphilitic diathesis, but also that he has vaccinated healthy children from syphilitic infants, without ever perceiving the slightest unpleasant results.

Professor Boeck, of Christiania, informs me that he has vaccinated children suffering from hereditary syphilis, and on the eighth day has vaccinated, with the lymph from their arms, leprous (but not syphilitic) patients, without having observed the communication of syphilis in a single instance, although the patients were kept under observation for a long time. Bidenkap,[1] indeed, states that in these vaccinations the blood of the vaccinifers was mingled with the lymph.

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[1] Viennois, *op. cit.*, p. 243; French Academy's *Reports on Vaccination*, for the year 1808, 21, 29, 34; Blache and Guersant's *Dictionnaire de Médecine*, 2, art. *Vaccine;* English Blue-Book on Vaccination, 1857; Auspitz, *op. cit.*

[2] *De la Syphilis Vaccinale*, p. 49.

[3] *Bull. Gén. de Thérapeutique*, July 15 and 30, 1855, quoted by Dr. Lyman, *American Medical Times*, March 1, 1862, p. 120.

We are warranted, then, in the conclusion (subject to revision in accordance with what further evidence may be brought to bear), that syphilis cannot be communicated by vaccination with pure eighth-day lymph. But, can we therefore subscribe to Dr. Anstie's dictum, that vaccinal syphilis is "a bugbear and a phantom?"[2] No. We can only say, that, although it is not proved that pure eighth-day lymph can, of itself, communicate syphilis, nevertheless, syphilis may be, and in several instances has been, imparted in vaccination, but that such conveyance of the disease is always avoidable, provided due care be taken. We have characterized experimental vaccinations with lymph from subjects known to be syphilitic, as unjustifiable, and so they are under ordinary circumstances. But, if vaccination with lymph from a syphilitic person be unwarrantable, what does it profit us to know that such a vaccination is not likely to convey syphilis? Just this: that such vaccination may be warrantable under certain conditions. At a recent meeting of the New York Academy of Medicine it was related that on a certain occasion a physician, practising in an isolated region, found himself pitted against an epidemic of small-pox, with no vaccine in his possession, and with no means of speedily obtaining any. Such being the case, he was compelled to fight the disease by the proceeding known as variolation. Now, who will say that under these circumstances this physician would not have been justified, nay, that his duty would not have consisted, in employing vaccine from a syphilitic subject, had it been attainable? And would it have been of no practical benefit to him and his community to know that such vaccine unmixed, would not convey syphilis?

Passing over the fact, now well ascertained,[3] that vaccination sometimes hastens the development of latent syphilis, or intensifies the cutaneous manifestations of the disease, let us consider the methods by which syphilis may be actually *communicated* in vaccination. In our enumeration of these we need do little more than systematically arrange the various methods of syphilitic inoculation which the reader will perceive to have been allowed in our commentary on the recorded cases. Syphilis may, then, be communicated in vaccination by the accidental admixture of syphilitic virus, in either of the following ways:—

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[1] *Norsk Magazin for Lægevidenskaben*, XVI., 1862.

[2] *Practitioner*, October and November, 1869.

[3] See Viennois, *op. cit.*, *passim;* Fridinger, *Zeitschrift der Gesellsch. der Aerzt. in Wien*, 1854, p. 428, and 1855, p. 157; Hanff, *Hufeland's Journal*, July, 1834; and Boeck, *Impfversuche* (*Controlimpfungen*), by Bohn and Bidenkap.

I.—*By blood-inoculation;* as specially advocated by Viennois.

(1.) From the vaccinifer to the vaccinee.

(*a.*) With blood derived from the floor of the vesicle, wounded by unskilful opening of the vesicle.[1]

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[1] In tho famous discussion of the subject of vaccinal syphilis, which took place a few years since at the French Academy of Medicine, M. Colin stated that vaccine lymph always showed blood-corpuscles under the microscope, and M. Ricord showed that the lymph which the Academy was then supplying to the profession was invariably found to contain blood. M. Viennois answered that, in order to be the vehicle of the syphilitic contagion, blood should be present in quantity visible to the naked eye. This raised the question as to whether the inoculability of an animal virus might, to a certain extent, depend on *quantity* as well as on *quality.* It would seem that this is in a measure true as regards vaccine (for vaccine will, if diluted with more than six times its own bulk of fluid, be found to be inert, unless the whole amount be used for one inoculation, in which case it will be found as active as before dilution; and that the impairment of energy is not owing to sparseness of corpuscular elements is shown by the fact that the removal of these by filtration does not affect the inoculability of the lymph [*vide Arch. Gén. de Méd.*, June, 1868, p. 732]), but is it equally true in regard to syphilis? It seems to me that on this question hinges the last possible doubt as to the power of unmixed vaccine to convey syphilis. The clinical facts thus far observed certainly favor M. Viennois' view. Further observation is necessary, also, before we can be justified in saying that vaccine always does contain blood. Not only the microscope, but other means of research, particularly spectrum analysis, and the guaiacum test, as described by Dr. Day, of Australia (*Australian Medical Journal*, November, 1869), should be made use of; and, this question once settled, we must consider whether one or more of the *elements* of blood only, or that fluid as a whole, be requisite for syphilitic blood-inoculation. "Dr. F. Keber has found in the vaccinal lymph, besides the elements of the epidermis, of pus and blood, special cellular productions, having the following characteristics: There are granular cells measuring 1-150th to 1-300th of a line; free nuclei of 1-800th to 1-3000th of a line; as well as punctiform molecules. These elements, more or less numerous, are never missing. The cellular elements show, especially by addition of water, an enveloping membrane; acetic acid makes the membrane transparent, and, on the other hand, makes the granulations more distinct; the latter are of from 3 to 20 in the

(*b.*) By blood which has been *effused* into the vesicle.

(*c.*) Possibly, from vaccination with a crust partly made up of concreted blood. In a case of this sort, it would be difficult to determine whether the offending elements in the crust consisted of blood, or of the secretion from a syphilitic lesion.

(2.) From the vaccinee to the vaccinifer: or from one vaccinee to another. We have already expressed the opinion that in most of the well-authenticated cases on record the conveyance of syphilis was effected in this manner.

II.—*By admixture of the secretion of a syphilitic lesion.*

As we have already stated (*vide* vol. i., p. 191), it was formerly maintained that if two separate viruses, *e. g.*, the vaccinal and the syphilitic, were simultaneously inoculated at the same point, the one would, as it were, neutralize the other, so that only one, if either, disease would result. If this were true, it would, as we have mentioned in the paragraph above referred to, not preclude the possibility of conveying syphilis by inoculation with the mixed virus. That it is not true has been established by experiment.[1] The mixed chancre is an analogical case in point. This sort of inoculation may occur in the following ways:—

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cells. They must not be confounded with pus-corpuscles, and they show different appearances, proving thereby an active cellular process, namely, multiplication by scission. These elements again are found in the vaccinal pustules from the fourth or fifth day. Even from the time when the lymph of the vaccinal pustules has been filtrated one may observe them. Finally, in the dried vaccinal lymph one may point out specially the molecular granulations. These elements should be distinguished from different productions seen in vaccinal lymph, such as crystals, needles, the tufts due to the crystallization of urates, and the vegetations which are found in changed vaccinal lymph. These formations, moreover, exist in the exudations, variolic pustules, and even in the scabs. Besides all this, in the pustules of varicella, the author has observed analogous, if not identical, productions."—*Journal de Médecine*, August, 1868, p. 135, quoted in Mr. J. F. Streatfield's "Chronicle of Micrology," in *Brit. and For. Med.-Chir. Rev.*, Oct., 1870, p. 53.

[1] See Bohn's account of Beaumès' and Sperino's experiment (*Schmidt's Jahrbücher*, Bd. 120, 1863); Fridinger's experiments (*Zeitschrift der Gesellschaft der Aerzte in Wien*, 1855, p. 157 *et seq.*) seem to have been made with a mixture of vaccine and *chancroidal* virus, or with a mixture of vaccine and the secretion of secondary lesions *on the persons of those bearing the latter*, and are therefore inconclusive, at least, for dualists. Sperino's result, though a solitary instance, must outweigh the negative results obtained by Fridinger and Boeck.

(1.) The secretion from a syphilitic lesion on the person of the vaccinifer may become mingled with the lymph and conveyed along with it, either—

(*a.*) In consequence of a neighboring cutaneous lesion being accidentally meddled with at the time of drawing lymph; or,

(*b.*) In consequence of such secretion having become smeared over the surface of the vesicle before it is opened.

(2.) Possibly, as conjectured by Ballard, syphilitic secretion may be implanted together with the vaccine, and subsequently *transported* from the resulting vesicle to another vaccinee.

(3.) Syphilitic virus from a third person may become accidentally smeared over the vaccinifer's vesicle.

(4.) Syphilitic secretion may, equally with blood, be conveyed from the vaccinee to the vaccinifer, or to another vaccinee.

(5.) Possibly, a crust used in vaccination may contain a portion of secretion from a syphilitic lesion. In this case, if Boeck's opinion, already referred to, in regard to the ephemeral nature of the contagious element of syphilitic virus, be correct, the conveyance of syphilis is more likely to be produced by the use of a very fresh crust than by employing one which is some weeks old.

(6.) Possibly, a vaccinial vesicle may become transformed into a secondary syphilitic lesion, and, being used after such transformation, be the means of conveying syphilis, but probably not vaccinia.

There are two other ways in which, it has been suggested, syphilis may possibly be conveyed in vaccination. M. Depaul[1] supposes that after an eighth-day vesicle has been drained of its proper secretion—the vaccinal lymph—the fluid which continues to flow from it is merely a serous transudation from the blood-vessels beneath and around the vesicle. To this view it has been very reasonably objected, that any such flow would not be a mere transudation, but a true secretion; that any syphilitic element in the serum of the blood in the capillaries would be destroyed or separated in the act of secretion, and that therefore the product would be no more capable of conveying syphilis than are any of the physiological secretions (the saliva, urine, &c.) of syphilitic individuals. That the fluid is really a true secretion, and not a mere transudation, would seem to be shown by the fact that it continues to show vaccinal energy. But, supposing it to be a mere serous transudation, we cannot say that the serum alone of the blood is capable of conveying syphilis.

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[1] *De la Syphilis Vaccinale*, p. 21.

It is urged by some writers, that, inasmuch as the vaccinial vesicle sooner or later contains a fluid more or less resembling pus, and that pus may in certain cases form in the vesicle at a period when it might be considered a fit source of vaccine, therefore the use of virus from such a vesicle may convey syphilis. But, as has already been stated, pus from a syphilitic person cannot, unless it proceeds from a syphilitic lesion, convey syphilis. We have allowed that a vaccinial vesicle may possibly become transformed into a secondary syphilitic lesion, but there is only the possibility, the probabilities being immensely against the occurrence.

We have stated that vaccino-syphilitic inoculation must be looked upon as always avoidable. It now remains to consider the means by which it is to be avoided. The whole subject of vaccinal syphilis forms, to the mind of the ordinary practitioner, a Gordian knot, which many are inclined to cut by relying exclusively on the use of virus direct from the heifer. This sort of vaccination has been extensively practised in many parts of continental Europe, notably in Naples, Brussels and St. Petersburg; and now, thanks to the enterprise of Dr. Henry A. Martin, of Boston, we are enabled to give it a fair trial in America. But, it is not within our present purpose to discuss the advisability of the general adoption of animal vaccination. Admitting that it insures immunity against the conveyance of syphilis in vaccination, we must recognize the fact that, for some time to come, at least, its employment will not be generally diffused, and we must therefore endeavor to frame rules for the guidance of those physicians in general practice who will still adhere to the use of the Jennerian virus, our trust in which has proved to be so well founded.

In the first place, we wish to express our decided conviction, that general practitioners, unless they have been well educated in syphilography, and have moreover had an exceptionally large experience in all matters connected with vaccination, should always obtain their supply of vaccine from those who pay special attention to the subject, rather than trust to the resources of their own practice. Of course, this advice cannot always be followed. When the physician takes virus from a vaccinial vesicle then, he should, for various reasons besides the endeavor to guard against syphilitic contamination, observe the following rules:—

(1.) Never take virus from a syphilitic child, or one born of syphilitic parents. If this rule could always be strictly followed, there would be little need of most of the other precautions in taking lymph. But such is not the case.

(2.) Never take lymph from a child under three months old, otherwise a subsequent development of syphilitic manifestations may be the first indication of latent syphilis.

(3.) Take lymph only on the eighth day after the vaccination.

(4.) Having selected the vaccinifer, choose a vesicle which contains no effused blood. Avoid a vesicle which has been ruptured. Bathe the surface of the vesicle, and the surrounding skin, gently, but thoroughly, with warm water, in order to ensure its being free from any deposit of syphilitic secretion, or other adventitious substance. Open the vesicle with a needle (or some similar instrument), taking care to enter the point laterally, so that the floor of the vesicle may not be wounded. Do not compress the vesicle, or surrounding parts, in order to increase the flow of lymph.

Crusts should be used only when reliable lymph cannot be obtained. When forced to use them, we should choose those that are several weeks old, in order to get the benefit of the supposed fact that the syphilitic contagious virus is more fugacious than the vaccinal. We should use only the translucent mahogany-colored central portion of the crusts, removing the superficial portion. Of course, we should be as careful to see that a crust has come from an unexceptionable subject as we should to ascertain the physical well-being of a subject furnishing lymph. Threads, which have been imbued with the secretion of a vaccinial vesicle or *sore*, should never be used as vehicles of vaccine. Of course, many of these rules may occasionally be violated with safety by an expert.

Such being the precautions to be employed in regard to the choice of vaccine, we may say that there is much more danger incurred in the performance of the operation, and that in this particular all preventive measures may be included in the one word, *cleanliness.* To ensure cleanliness, the following injunctions should be faithfully complied with :—

Never apply the same instrument to two individuals in succession. If the arm-to-arm method be the one employed, do not take the lymph from the vaccinifer's vesicle with a lancet, but use quill-slips, points of ivory, or something similar, which should be *thrown away* after having once been used. A reference to Bonnière's case will show the necessity of this advice. Never apply to the vaccinifer's vesicle, or use on another child in the series, an instrument with which a puncture or scarification has already been made. "It will indeed be said, or at least it may be said," says M. Ricord,[1] "that the instrument is cleansed, or that it may be cleansed, or even changed, at each inoculation, but let me put the question in all seriousness : In these operations, necessarily rapid because performed on a great number of subjects at a sitting, is this done, has it been done hitherto?" It is idle to think of cleansing an instrument during a series of vaccinations. Nothing short of *boiling* will cleanse an instrument rapidly and efficiently. It is necessary, then, to use a separate instrument for each person vaccinated. In the case of public vaccinators, or of many practitioners who, in times of small-pox panic, are called upon to vaccinate large numbers of persons at a sitting, if ordinary instruments were used, it would be necessary to have on hand an inordinate supply of them. To reduce this objection to a minimum, I have devised an instrument which may be described as follows: Five ordinary sewing needles are soldered to a flat metallic plate. This constitutes the essential part of the instrument, and is used as a scarificator. For convenience, the scarificator is inserted into the handle, which is of ivory, and has half of its thickness, for a portion of its length, cut away for the reception of the metallic plate. At the objective end there is a metallic cross-bar, perforated with five holes, each somewhat larger than a needle, which cross-bar, being fastened by a pivot, may be made to turn around the end of the handle to facilitate the fixing and unfixing of the scarificator, which latter is held in place by forcing back the projecting eye-ends of the needles into a groove in the handle. A large number of the scarificators should be kept on hand, and, on beginning a series of vaccinations, one of them is fixed in the handle, the first candidate scarified, the points of the needles wiped with a rag to prevent blood being rubbed off on to the metallic cross-bar, the scarificator unfixed and thrown into a disinfectant solution (that which I employ is a solution of carbolic acid in linseed oil, five grains to the ounce), and its place supplied with a fresh one. In this way a large number of people may be vaccinated at a sitting, each one with a perfectly pure instrument, so that all danger of blood-inoculation is avoided, and without even as much delay as would be caused by the most ordinary attempt to partially cleanse a lancet. I now use this instrument altogether at the New York Dispensary, and find that it has the additional advantage of causing less pain than does the ordinary toothed vaccinator.

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[1] *De la Syphilis Vaccinale*, p. 44.

While, then, we cannot admit that, as Dr. Anstie phrases it, vaccinal syphilis is "a bugbear and a phantom," we can most heartily indorse the statement, presumably made by the same writer, in a review[1] of Mr. Henry Lee's recently published lectures on pathology, to the effect that the recorded cases "would never have obtained more than a momentary importance, had not these unfortunate occurrences been seized upon as a new battle-field for the conflicting schools of syphilography," and may add, that any failure to avoid such consequences shows gross malpractice, and cannot be considered as owing to any inherent fatality.

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[1] *The Practitioner*, June, 1870. I desire to express my indebtedness to Dr. Vandervoort, the Librarian of the New York Hospital, for facilities in examining many works referred to in this paper.

Clinical Contributions.

THREE CASES OF PSORIASIS OCCURRING DURING LACTATION, AND ONE CASE OF SEBORRHŒA SICCA.

BY M. H. HENRY, M. D.,

Surgeon to the New York Dispensary:—Department of Venereal and Skin Diseases.

CASES OF PSORIASIS DURING LACTATION.

Case I.—A. E., 30 years of age, has been married ten years, and has had four children, born at intervals of about two years. Her family history was good, and none of them had been troubled with skin-diseases. Her husband was a strong, healthy man, aged 32, and his parents were still alive and well. He also had brothers and sisters, also alive and well. During the wife's first pregnancy she had suffered very severely with gastric disturbance and œdema of the lower extremities, but did not feel very much debilitated. She was very freely purged, by the directions of her physician, taking, as she says, Rochelle salts. During the parturient process she had no uræmic symptoms, nor after that was there any profuse hemorrhage to debilitate her. Her child was a strong, healthy boy. The mother seemed also very healthy after her confinement, losing entirely all traces of her œdema. But when the child was a month old, she noticed that a very scaly rash appeared all over her body. For this her physician gave her some drops, of which she said she took five three times a day. She said that she took this for about six months, and that the rash then disappeared, but her opinion was that the medicine did not assist in the process. Soon after this she weaned her child, which has since been healthy. A little more than two years after, she again became pregnant, and in about six weeks she had the same rash again; she took some medicine also for this, but it remained, she thinks, eight months, being very copious for the first few months, then disappearing from all parts except the buttocks, elbows, and knees, where a few large patches remained for a long time, so that the whole duration of the rash was about eight months. In this pregnancy, she had no debility, nor gastric disturbance, nor anasarca. Two years subsequently she had another child, and this time her rash did not appear until it was three months old; she took no medicine whatever, and it lasted about ten months. In January, 1870, she had a fourth child, having had good health during and after her pregnancy until March, when she bruised her knee, and for this she applied at the New York Dispensary. Upon looking at the knee, I found some slight contusion; but my attention was particularly drawn to a very extensive patch of psoriasis near the site of the contusion. Upon asking her how long she had had this, she said that it came every time that she was confined, and that it would go away of itself, and all she was anxious about was her knee. At this time I merely gave her an evaporating lotion, and told her to return upon the next consultation day. She came promptly, and was much pleased by the subsidence of the swelling and pain in the knee. I then told her, having gained her confidence, that I could cure her of her skin disease, but she appeared very doubtful about my ability to do it, and objected to taking so much medicine. I found very extensive patches of psoriasis upon the scalp, face, forehead, the back of the neck, the whole extent of the back, the buttocks, the legs and knees, and arms and elbows. The desquamation was extremely copious, and the scales were not as adherent as they sometimes are. She said that she was perfectly healthy, and had a good appetite, and that her baby also was well, and that this "scurf" did not annoy her now. I gave her a mixture, each teaspoonful of which contained five drops of Fowler's solution, and not wishing to use external remedies, confined my treatment to this. In one week, as there was no improvement, I added three drops more, and she took this quantity three times a day for two weeks,—still without effect. It was then increased to twelve drops, and continued for three weeks, when I was forced to abandon it in consequence of the specific effect of the arsenic. The eruption had not undergone any improvement whatever, and the patches were as thick and scaly as at first. She seemed thoroughly discouraged, and it was only with much persuasion that I prevailed upon her to persist in taking medicine. I then substituted cod-liver oil and syrup of the iodide of iron, giving her two teaspoonfuls of the former with twenty drops of the latter, three times a day. After taking this ten days, a very decided improvement was noticed. The syrup of the iodide of iron was increased to twenty drops and the oil to three teaspoonfuls. In two weeks the desquamation had nearly ceased, the patches began to subside, and in a month the whole body was free from any rash.

This case is interesting in the fact of the appearance of psoriasis with each lactation, and that though treated several times by the so-called specific for psoriasis, namely, arsenic, it finally yielded very rapidly to cod-liver oil and iodide of iron. Still the mother did not appear anæmic. I would also add that her children were both boys and girls, and that the rash appeared with each, not observing, as in McCall Anderson's case, an intermission during the nursing of a girl and an evolution while nursing a boy.

Case II.—A woman, aged 24, having been previously healthy, stated that three months before she had been delivered of a male child, and that her milk, which was scanty from the first, had, within a month, gradually ceased to be secreted. She said that about the same time a rash began to appear upon her arms and knees, and gradually spread over the whole body. Upon examination, I found a very copious eruption of psoriasis, which occupied the whole body; it observed all of its forms, and desquamated very freely. The woman seemed very anxious about the origin of it, as she had been told by her neighbors that it was syphilitic. Her general condition was not good. She had severe fainting fits, and felt weak and debilitated. This state of health had followed her confinement, as during gestation she had been quite well. She was directed to take five drops of Fowler's solution, with fifteen drops of syrup of iodide of iron, in a bitter tonic three times a day. Externally, after a warm alkaline bath, she was to rub the whole surface with a preparation of green soap. An immediate improvement was noticed, but the patient became negligent in the use of the remedies. In a month the whole eruption was as bad as ever, and she, after promising to follow the directions faithfully, was placed upon the same treatment as before. A marked improvement again occurred, and in about six weeks her rash had wholly disappeared. In the meantime, the dose of Fowler's solution had been increased to fifteen drops, and that of syrup of iodide of iron to half a teaspoonful.

This case is interesting, as it shows that a very copious eruption of psoriasis made its appearance almost at the time of cessation of a physiological process, which was also attended by symptoms of great debility.

Case III.—A woman, aged 20, applied at the Dispensary in May, 1870. She stated that, a little more than a year previously, she had been married, and that soon after she became pregnant. During her pregnancy she had enjoyed perfect health, much better than ever before, and during her whole life she had been weak and delicate. Her father had died of phthisis; her mother was alive but suffered from dropsy, and she had lost an only brother by some obscure brain-disease, and a sister had died at sixteen from some pulmonary trouble. Her child was a very hearty boy, and nursed continually, so that she was very much weakened by it, and did not have enough to satisfy it. When the boy was one month old, she noticed that a rash appeared upon her body, which became very extensive, and now is irregularly scattered over the trunk and extremities. She says that it itches very much, particularly at night. The baby has a very copious eruption of eczema upon the head, arms, and buttocks. I ordered the woman to eat plenty of animal food, with a glass of ale twice a day, and as medicine she was to take two teaspoonfuls of cod-liver oil, with twenty drops of syrup of iodide of iron three times a day, and to do nothing for the rash upon her own person. She was directed to cover over the eczematous eruption upon the child with zinc ointment, but not to give it any medicine. In a week she came back very much pleased, saying she was better, that the rash did not itch any more; but I did not see the least improvement in its appearance. She thought, however, that she had more milk than she had had previously to applying at the Dispensary, and that she was not as weak as she had been. I was convinced that her general condition was very much improved, although the rash was as copious as ever. The rash upon the child was also much improved. I directed her to take three teaspoonfuls of the oil with half a teaspoonful of the syrup of iodide of iron. She took these quantities about two weeks, and could then nurse her baby without any difficulty. She no longer felt weak, and her rash did not itch; still it had not undergone much change. There was still as much thickening and desquamation as ever, but I did not notice any new spots forming. The same doses were continued, as I regarded the psoriasis merely as an expression of debility. She followed this treatment for two weeks more, and there was then not a very marked improvement in the eruption. The child had steadily improved without having taken any medicine, but had been treated locally by the zinc ointment. At this juncture I decided to add five drops of Fowler's solution to each dose of the medicine previously prescribed. At the end of a week I could see no improvement, but I persisted in the same treatment, increasing the arsenic to eight drops. This was continued a fortnight, and then I saw that considerable change had taken place; there was much less desquamation, and the patches were very much less infiltrated. During the whole period, I had purposely refrained from using any external application. The treatment was still kept up; the improvement continued; and in about five weeks from the first exhibition of the arsenic the psoriasis had wholly disappeared.

This case is very important, as it shows that the general condition was immediately improved by the use of iodide of iron and cod-liver oil, and, as a consequence, the woman could without any difficulty nurse her infant. Still, with all this improvement of the general condition, the eruption remained uninfluenced, except that the itching was ameliorated, and finally yielded more rapidly to the action of arsenic. As the child did not take any medicine, it is probable that the disappearance of its eczema was due to the altered condition of the milk which it derived from its mother, who took the medicine.

CASE OF SEBORRHŒA SICCA.

Case of K. R., aged 21, married one year; has been pregnant three months. About two months ago she noticed that her face felt hot, and smarted. Soon after it became quite red. This condition has continued until now, when there is presented an erythematous blush over both cheeks, upon which are seated minute thin scales of a dirty appearance. There is no infiltration, but around the alæ nasi there is considerable sebaceous matter. She never had had any disease, and when she became pregnant had suffered from gastric disturbance. She was ordered to take thirty grains of the acetate of potash three times a day, and a mixture of equal parts of liquor potassæ and glycerine, to be applied to the parts twice daily. In a week she was much improved, and she ceased to attend the Dispensary.

The question as to the cause of this lesion is interesting. Whether it was an inflammation of the sebaceous follicles due to the pregnant state, or other causes, we are unable to decide.

A CASE OF DISPLACED CANCEROUS TESTIS.

BY GEORGE THOMPSON, M.D.,

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The following case presents several important points of clinical interest.

C. F. R., a German, aged 51, picture-frame maker, of healthy parentage, and he himself having enjoyed good health, and never having had gonorrhœa. While in the United States service as a marine, off Charleston, S. C., received a blow upon his right testicle while lowering his hammock. The force of the blow displaced the testis from the scrotum upwards over the external inguinal ring. It was attended with considerable pain, which gradually subsided without recourse to medical aid. As the testis remained in this position, he became uneasy about it, and repaired to the surgeon, who, after very violent manipulation, did not succeed in replacing it, but created considerable inflammation. The acute symptoms gradually subsided, but the testis remained slightly enlarged.

This same condition, accompanied in damp weather by a dull pain, continued until March, 1870, when, in consequence of an injury received during coitus, the inflammatory action again supervened. The testis gradually enlarged and became painful. He applied to me at the New York Dispensary, September 14, 1870, having a large oval swelling just above Poupart's ligament and midway between the symphysis pubis and the anterior superior spinous process of the ilium. The longitudinal axis of the tumor was in coincidence with Poupart's ligament, and was probably of an extent of five inches, while its diameter was about three inches; the apex of the tumor, which was of a conical shape, was about three inches elevated above the plane of the abdominal walls. There was not an unusual tension of the integument, and it could freely slide over the parts beneath. Upon manipulation, a somewhat oval tumor was found, which was not nodulated, and was readily moved over the deeper parts, not being in any manner adherent. The left testis was found in the scrotum, and was of normal size, but the right one was absent, and the right half of the scrotum was very much atrophied. Upon invagination of the scrotum, the external ring could be clearly felt, and the finger would touch the lower or internal end of the enlarged testis. It was evident that the testis was seated upon the external oblique muscle, between the layers of the superficial fascia, having, in consequence of the force below, been driven upwards along the course of the cord, which is here covered with this fascia in the form of a tubular prolongation. Resting here, it undoubtedly became adherent during the first inflammatory process, by the proliferation of connective tissue; and it is also probable that the violent manipulation of the surgeon contributed to the production of more adhesions.

From the history of the case I concluded that it was one of cancerous disease, and my opinion was confirmed by the staff of the Dispensary, and it was decided, as the man was in good general condition, to operate immediately. On September 21, 1870, assisted by Drs. Parker and Buck, and my colleagues, Drs. Henry, Taylor, and Foster, the patient being etherized, I made an incision in the direction of Poupart's ligament, over the tumor. After the integument and fascia were divided, I came down upon the tumor, and before proceeding further, I cautiously divided the tunica vaginalis, from beneath which about two ounces of serum flowed out, thus materially lessening the size of the swelling. The subsequent steps were readily accomplished. The pedicle of the tumor, which was composed of the cord which looped around the external ring from above downward, was very short, so that it was necessary to enlarge slightly the ring in order to get sufficient of the cord to tie its vessels. The tumor, after being readily enucleated, was severed from the cord. The hemorrhage was slight, and readily controlled by tying one artery, probably the external epigastric. The wound was closed by sutures, and healed in about two weeks. The enlarged testis was somewhat nodulated, and the tunica vaginalis was thickened. The length of the tumor was about four inches, and its diameter about three inches. When incised, a pultaceous substance was seen. The microscopic examination of the tumor was made by Dr. A. H. Buck, who pronounced its tissue to be simple cancer.

CASE OF TRAUMATIC STRICTURE OF THE URETHRA, AND A CASE OF INFLAMMATION OF THE VAS DEFERENS.

BY F. N. OTIS, M. D.,

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CASE OF TRAUMATIC STRICTURE.

Mr. G. R. presented himself at my office, October 24, 1870, with the following history:—

At the age of five years, he was attacked with what was supposed to be inflammation of the bladder, coming on suddenly, and associated with difficult micturition, for which poultices were applied to the abdomen and warm water injected into the urethra. The difficulty lasted for several days, and passed off gradually. From that time, however, Mr. R. is confident that his urination was unnatural; remembers particularly at the age of 10 years that "the boys at school laughed at him because he was so long in emptying his bladder." At the age of 20, from a cold, he had an attack of retention of urine, for which hot baths were used and leeches applied; after fainting from loss of blood, his difficulty was relieved. After this attack, he was under the care of the late Surgeon O'Rielly, who passed a small instrument into his bladder, and used Lallemand's *porte caustique* on several subsequent occasions, and gave him a small elastic bougie to use. This bougie, patient had continued to use at intervals of about fourteen days, with but little difficulty, up to the present time.

Examination.—Age 23; nervo-bilious temperament; slight figure; genitalia well developed. Prepuce redundant, meatus small, just admits No. 12 French bulbous bougie—this, however, is arrested at 4½ inches; No. 11 passes 5 inches, No. 8, 5¼ inches, No. 7, 6¾ inches, No. 6 passes into the bladder; extent of stricture about two inches; distinct ridgy sensation communicated to the touch on the passage of the instrument; cicatricial bands distinctly felt on passing the finger outside along the strictured portion of the canal during passage of the instruments.

Oct. 28th.—Passed No. 7 elastic bougie with ease, followed it with Nos. 8 and 9 with some difficulty; ordered patient tr. ferr. mur., ten drops every two hours, to decrease the risk of retention of urine, which is known occasionally to occur as a result of the introduction of instruments.

Nov. 7th.—Had no trouble following passage of instruments at previous visit, beyond the exudation of a few drops of blood. No. 9 again introduced, but hugs at the strictured part very closely—instrument had to be stiffened by the introduction of a wire stylet before it could be passed through the stricture.

Nov. 11th.—Some difficulty in urination followed the use of No. 9 at the last visit, which, however, soon passed off under the free use of the iron.

Nov. 15th.—No. 9 passes easily into the bladder without the stylet.

Nov. 23d.—Passed No. 10 with ease, followed it rapidly with No. 11 without difficulty; a drop or two of blood followed the withdrawal of the instrument, but patient distinctly asserted that he had felt no pain. Iron every two hours for twelve hours, as before.

Nov. 25th.—Patient calls, stating that he had a chill about eight hours subsequent to the passage of the last instrument, followed by fever and sweating; has had fever and ague several times during the past year, and thinks the attack excited this time by passage of the instrument. On the following morning he felt very badly, and suffered with pain in his left groin, running up over the hip, also in the perineum, and an aching of the left testicle; these pains have decreased somewhat, but are still present, and are somewhat aggravated by pressure. I declined passing an instrument; ordered Lugol's tincture of iodine to be painted over the track of pain and tenderness; ordered also suspensory bandage for the testicles, and the recumbent position to be maintained until all uneasiness had disappeared.

Nov. 29th.—The discomfort and tenderness of groin, perineum and testicle having passed away, I introduced No. 11 through the stricture with ease and without pain.

Dec. 8th.—No trouble following the passage of No. 11 at the last sitting, re-introduced it to-day, and followed it with No. 12, stricture hugging it closely.

Dec. 16th.—No. 12 passes easily ; slit the meatus and pass 13.

Dec. 20th.—No. 13 passes readily ; also 14. Furnish the patient with No. 12 steel sound, which he passes with ease in my presence. Advise its introduction every ten days, and to return to me in case of any difficulty in the introduction of, or following the use of, the instrument.

The especial point of interest in this case centres in the origin of the difficulty. The patient, who is a young man of twenty-three years, and of unexceptionable character and habits, positively states that he never had a carnal exposure, never had any discharge from the urethra, nor any other difficulty connected with the genito-urinary apparatus, except that mentioned in the history of the stricture. There was no suspicion of calculus at any time, nor any passage of blood following micturition, nor any sudden stoppage of water while urinating. No account of any blow or fall, or injury to the external parts of any kind. The patient states that his mother is confident that, prior to the age of five years, he had no trouble in urinating, and that the physician in attendance during his first attack pronounced the difficulty an inflammation of the bladder.

The age of the child precludes the idea of gonorrhœal trouble. Masturbation for the same cause must be excluded. John Hunter alleges scrofula as a possible cause of infantile stricture. Thompson * quotes from Hunter a case of stricture occurring in a boy of eight years, of scrofulous habit, and a thickened cornea of one eye, who was treated for stone in the bladder; but in the case of Mr. R. there is no history nor any present evidence of the scrofulous diathesis. Could the stricture have resulted from an idiopathic peri-urethral abscess opening into the canal and causing subsequent contraction? Or was it dependent upon calculous trouble? and, if so, how? Accidentally meeting my friend, Dr. J. W. S. Gouley, I stated the case to him in brief, and asked his opinion, which he gave me, and which is so clear and satisfactory an explanation of the cause of the stricture in my patient (as also in the scrofulous case quoted by Thompson), that I will insert it here.

Dr. Gouley regards this variety of stricture to be of traumatic origin, and due to lodgment of an uric acid calculus in the sinus of the bulb or its neighborhood. The symptoms are generally as follows: A child during urination is seized with very violent pains, the cause of which is unrecognized, but which in reality is due to the lodgment of this rough calculus. This pain is paroxysmal in character, and ceases when the parts become habituated to the foreign body, which may become deeply embedded in the tissues. The result is either that the calculus remains and increases, sometimes to considerable size, or in a few days it becomes loose, and is washed away without

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* Stricture of the Urethra. London edition, page 102.

being discovered. Ulceration is produced, and subsequently cicatrization, which results in a greater or less contraction of the calibre of the urethra. The progress of this contractile process may be rapid or slow, and, in the latter case, symptoms of retention may not occur until adolescence.

CASE OF INFLAMMATION OF THE VAS DEFERENS.

Epididymitis resulting from the passage of instruments through the prostatic portion of the urethra is by no means rare. The inflammation set up at the orifices of the seminal ducts in the prostatic urethra is continued along the vas deferens to the epididymis. I have not, however, met with any record of an inflammation of the vas deferens set up by such means which was distinctly confined to that canal, and which passed off without involving the epididymis. The difficulty following the passage of the bougie on the 25th of November, in the case of Mr. R. just cited, is in point. Another instance of the same accident occurred in the person of Mr. B. W., who was the subject of a gonorrhœal stricture of sixteen years' standing, and who came under my care some two years since with a contraction of the urethral canal at the peno-scrotal angle, which only admitted a filiform bougie. After dilating his stricture up to No. 12 (English), he passed from my observation, only returning to me in September last. Again examining him, I found No. 1 (French) passed the stricture, but hugged closely; seeing him about twice a week up to November 1st, I had increased the size of his canal up to No. 10, without unusual difficulty. When finding this number borne without pain, I followed it with 11 and 12. No pain or bleeding resulted. On the 3d of November he came back complaining of pain in the lower part of the abdomen, extending up along the left groin—pain also in the back and perineum, aching of the left testicle—also considerable fever and restlessness, which had disturbed his sleep, but which was rapidly subsiding from the effects of a hot bath which he had taken. I found some tenderness remaining on pressure along the track of the vas deferens, and ordered tincture of iodine to be painted over it—advised a suspensory for tho testicle, and rest in the recumbent position. Mr. W. returned on the 7th instant, expressing himself perfectly free from all discomfort, and desirous of having the dilatation of the stricture continued. On this occasion I introduced very cautiously, and without discomfort to the patient, a No. 10 Bèiniqué sound. On the 9th I was called to see my patient, and found him suffering from a violent attack of epididymitis, and for which at the present writing he is still under treatment.

BUMSTEAD ON VENEREAL DISEASES.*

It has been long and generally conceded that a book that has passed through several editions is so far beyond criticism that anything like an extended review is regarded as superfluous. In the field of romance and poetry this rule may serve very well, but when applied to works embraced in the circle of the progressive sciences, abundant evidence is furnished every hour to prove the fallacy of any such concession.

In 1861 the first edition of Dr. Bumstead's work was placed before the profession, and at that time it was justly regarded as one of the most useful books, on the subjects it embraced, published in this country. It possessed the merit of being a carefully compiled summary of the views on venereal diseases then entertained by many of the most distinguished syphilographers of continental Europe. To the American medical practitioner, possessing few or no facilities of access to the expensive works published in France and Germany, Dr. Bumstead's book was undoubtedly of great service.

Bassereau and Rollet, from whom Dr. Bumstead drew largely, have never been translated; in fact, were at that time comparatively unknown, except to those who were cultivating a special knowledge of syphilis. The increase of venereal diseases, due to excesses pending the war of the rebellion, created a demand for a work of this kind, and Dr. Bumstead's book became at once the *vade-mecum* of the military as well as the civil surgeon. In 1864 a second edition appeared. Ten years have elapsed since Dr. Bumstead first appeared as a writer on venereal diseases. Since then many scientific men, including many of the most accomplished clinical observers in this country, have devoted their talents and energies to the study of the pathology and varied phenomena of syphilis.

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* *The Pathology and Treatment of Venereal Diseases; including the results of recent investigations upon the subject.* By Freeman J. Bumstead, M. D., Professor of Venereal Diseases at the College of Physicians and Surgeons, New York, etc. Third edition, revised and enlarged, with illustrations. Philadelphia: Henry C. Lea. 1870.

The special literature, both in this country and in Europe, scattered through the various journals, shows with what zeal and interest venereal diseases have come to be regarded during the past ten years. At the time Dr. Bumstead's book first appeared most practitioners were led to think it sufficient for the occasion. While the book still retains many excellent features, we regret that in many points it is scarcely up to the standard of modern research. In going over the book we find much to praise, and in many instances find ourselves *contra* to the author both in practice and in clinical experience. In "the results of recent investigations," we think the author is scarcely up to his task. The reader, however, must judge.

The introductory chapter is clear and in a measure comprehensive, when we take into consideration the modified views of the author since the last edition of his work was published. When the attention of the profession is called to the fact, many will doubtless be surprised that Dr. Bumstead has only been impressed within the past few months with the mass of evidence brought forward by authorities such as Köbner, Bidenkap, and others, and which has been accumulating since 1864. This cumulative evidence has been from time to time published in the standard journals and periodicals, and is certainly not, as Dr. Bumstead would lead his readers to suppose, due to the investigations of Mr. Henry Lee or to Dr. Boeck, but, rather, due to the results of the experiments of Bidenkap and Köbner during the years 1863 and 1864, which subsequently were thoroughly investigated in Germany by the most accomplished syphilographers, among them Bärensprung, Hebra, Kraus, Pick, and Reder. The result was that, among others, Reder recanted his former views; and if Dr. Bumstead will consult the last edition of Reder's work he will find a candid admission to that effect.

We confess our surprise that, in the discussion of the views entertained respectively by unicists and dualists, Dr. Bumstead should have omitted these important facts and the valuable accumulated evidence in favor of unicism; it might possibly, had he known of these investigations, have deterred him from speaking in the flippant manner he did in his introduction to the translation of Cullerier. A full statement of the most important arguments for and against unicism and dualism was published in the July number (1870) of this journal.

Bassereau seems to have been Dr. Bumstead's first guide in the study of venereal diseases; Ricord, Rollet, and Fournier subsequently so far enlisted a share of his attentions that they prevented him from availing himself of, or using to any advantage, the scientific and invaluable deductions of the German investigators.

That part of the work devoted to the nature and treatment of gonorrhœa is, taken as a whole, creditable, and we are glad to find the author insisting on the fact that gonorrhœa and blennorrhagia may at times result from non-specific causes. The clinical history of the disease is clearly discussed. In the consideration of the treatment, the poly-pharmacy we can only regard as absurd. In one half-page the author might have told all that the practitioner cares about knowing of the applicability and mode of administration of all such drugs as cubebs and copaiba in the treatment of gonorrhœa.

On the use of the oil of santal-wood we can indorse all that is said. Dr. Bumstead condemns capsules of copaiba and cubebs, and recommends in their place dragées of the same drug. In our own experience, from careful and extended observations, we are satisfied that the Raquin and Mathey-Caylus capsules of copaiba alone, or combined with cubebs, are by far the most eligible mode of administering these agents; we have certainly never heard from patients that they produced eructations or "burst suddenly in the stomach." The gelatinous capsule dissolves slowly in the stomach, and seldom causes any gastric disturbance; on the contrary, the French dragées are composed of copaiba solidified by magnesia, and, we are satisfied, are almost inert, due doubtless to their insolubility. When copaiba is combined with magnesia the chemical effect is to produce a substance of a stony hardness,—only acted upon, if at all, with the very greatest difficulty by the intestinal secretions. With these exceptions the remarks upon the uses of and indications for anti-blennorrhagics are judicious, and the directions for the regimen of the patient are in the main correct.

The chapter on gleet, with some few exceptions, is good. The use of medicated oils and ointments in chronic urethral discharges we have good reason to believe to be not only of little or no benefit to the patient, but too often mischievous.

On the use of the endoscope in the exploration of the urethra, we confess the absence of any great enthusiasm. It may, in some instances, possess practical value. Dr. Bumstead indorses the instrument of Cruise and Désormeaux. For all practical purposes the meatoscope, but slightly alluded to by Dr. Bumstead, will answer every purpose, and possesses these advantages: It is not cumbrous; it is inexpensive, and can be used with an ordinary good light with much more facility than either of the instruments above named.

Among the many solutions for gleet and gonorrhœa suggested by Dr. Bumstead, we find one in which the bichloride of mercury forms a prominent part. We would advise those of our readers who have not already had experience in the use of this drug, in this way, to avoid the dangerous metal. The dangers from its use are, at times, alarming; the results of the most distressing character;—retention of urine, bloody discharges, swelled testicle, and inflammation of the penis. The only benefit arising from this course of treatment may with the greatest ease be accomplished with a simple and less dangerous salt. If the corrosive sublimate be used at all, it should never be exhibited more than twice in one week, and followed several times daily by the use of a solution of the watery extract of opium.

The chapter on balanitis is sufficiently clear, and full of clinical details. On phimosis and paraphimosis, the author has not added to his former editions, although many valuable suggestions have been made, including modifications and improvements in the surgical treatment of these conditions of the parts.

Of the complications of gonorrhœa, particularly swelled testicle, Dr. Bumstead gives an admirable clinical description. In speaking of Velpeau's method of incision into the tunica vaginalis, Dr. Bumstead is unsteady in his statements, and leaves the reader in a doubtful state of mind regarding the expediency of resorting to this simple operation. The abhorrence of a patient to the use of the knife is certainly no greater in this than in any other condition calling for its use, and, unless some better argument can be adduced against it, we should certainly advise our readers to resort to it whenever it is fairly indicated and promises relief.

In discussing Dr. Vidal's operation—puncture into the tunica albuginea—we are led to think Dr. Bumstead speaks without experience. The recent attempt of Salleron to cast discredit upon Vidal's statistics has attracted special attention to this operation during the past year. Dr. Bumstead's allusion to Mr. Henry Smith, of King's College Hospital, who also advocates this method of treatment, is exceedingly ungenerous, and does not represent the facts in a way we have a right to expect. He says: "Mr. Smith has recently advocated the same treatment by incision into the body of the testicle, and states that he has met with results which have astonished himself and his numerous pupils. Mr. Smith apparently regards this treatment as original with himself!" If Dr. Bumstead will again turn to page 149, Vol. II., *Lancet* for 1864, he will find what Mr. Smith does say: "I have seen one of my old pupils who has been spending the last six months in the Paris Hospitals, and he informs me that the ordinary practice at the Hôpital du Midi in cases of acute orchitis is to make a puncture in several places with a lancet; the instrument is not carried into the body of the testicle, but simply through the tunica albuginea. He describes the plan of treatment as most successful."

The chapter on gonorrhœa in women is good. On the sequelæ of gonorrhœa and on the treatment to be pursued in these conditions, he is sufficiently explicit.

About one hundred pages are devoted to the consideration of stricture of the urethra. We have always regarded this as somewhat out of place. The general works on surgery treat of this in all the fulness of detail necessary to guide the surgeon in the course he should pursue in the different phases of stricture met with in every-day practice. Should he desire more information than is usually afforded in these works, he will certainly not consult Dr. Bumstead, but Sir Henry Thompson, or Philips, or Vollemier, or Reliquet, or Schilling, whose admirable works are exhaustive. The surgical anatomy is mainly derived from Gray, including many excellent ideas from Dr. Gurdon Buck. We earnestly desire, with Dr. Bumstead, to establish in this country the use of the French scale in dilating instruments. The French olive-pointed bougies are beyond question the most useful instruments of the kind to be had. The modesty of Dr. Bumstead is questionable in suggesting a case of urethral instruments, in which he advises his own modifications (?) of Maissoneuve, Holt, and Vollemier.

Some of the best chapters in the book are those devoted to the history and treatment of chancroid and its complications. The description of the chancroids of the integument of the penis is both meagre and unsatisfactory. The initial lesion of syphilis and the chancroidal ulcer of these parts in their clinical histories, have so many marked and clearly-defined features, that we regret Dr. Bumstead has treated this portion of his work in so desultory a manner. On chancroids of the anus and rectum, our author is extremely unsatisfactory. Our own experience regarding the tendency to phagedæna of these parts, is that of most other observers—it is extremely rare.

Dr. Bumstead speaks of "venereal stricture of the rectum," a condition heretofore known as stricture of the rectum due to syphilis. Dr. Bumstead places himself in opposition to most observers who have had any experience in this condition of the female parts. While we are willing to admit that chronic chancroids may be the cause of a strictured condition of the rectum, we, nevertheless, unhesitatingly state our opinion, that strictures of this region, as well as those of the œsophagus, may be the result of syphilis—the ulcerating lesions of syphilis being more inveterate in their course in this locality than are chancroids.

In the introduction to the consideration of syphilis, our author is far behind many writers of the present day. In his outline he is cramped and narrow, and fails completely in that largeness and breadth in the treatment of his subject one would expect from the size of the book and the claims of the author. Dr. Bumstead lacks entirely that power of generalization so essential in treating of this most important branch of venereal diseases.

In speaking of the rarer sites where the initial lesion of syphilis is sometimes observed, Dr. Bumstead says: "The most extraordinary instance which has come under my observation, was one of a chancre upon the internal surface of the upper eyelid. The patient applied to me for disease of the eye, and on everting the upper lid, I found a superficial excoriation which bore a striking resemblance to a chancrous erosion, and just in front of the ear, on the same side, an indurated ganglion was present. The genital organs were sound. I exhibited the case to my class at the College of Physicians and Surgeons, and under expectant treatment secondary symptoms made their appearance after the usual period of incubation."

Dr. Bumstead regards this as an extraordinary case, and the freshness and simplicity he displays in relating it force us to the conclusion that he really thinks it is unprecedented.

We beg now to call his attention to page 104 of that valuable clinical treatise on venereal diseases by Clerc, where, in treating of extra-genital chancres, he will find the following remarks, and which we translate for the benefit of our readers: "The initial syphilitic ulcer seems to have been first described by W. Lawrence, in the following terms: 'The eyelids are the seat of syphilitic ulcerations, which I believe have not been described, though they are comparatively common. These ulcerations have been observed to commence on the free border of the eyelids, and to destroy in their progress the skin, the conjunctivæ, and the tarsal cartilages.' In other cases these ulcers commence upon the conjunctivæ. Whatever may be their point of origin, the eyelid is always liable to disorganization, if the progress of the disease is not promptly arrested. The infecting chancre of the eyelids may be seated upon either the cutaneous or the mucous surface of these membranous curtains. We have seen a single case of infecting chancre of the inferior lid in a young man affected at the same time with a similar chancre on the penis; this chancre of the cutaneous surface of the eyelid was seated in the groove underneath the lower lid. It was of the indurated type, and presented the appearance of those singular lesions of the skin known as keloid. M. Robert has observed a chancre at the external canthus. The infecting chancre of the free border of the lid of the palpebral and ocular mucous membrane is not very rare; we have observed eight cases of it, and we find others described in works upon ophthalmology."

Dr. Bumstead regards the superficial erosion as the most frequent form of the initial lesion. In our own experience this is certainly not the case. The hard chancre we meet with quite as frequently both in public and private practice. The frequent feature of the chancrous erosion, consisting of a diphtheritic layer, was first described by Clerc, and to him alone is due the credit of having first called attention to it. The student who desires a full and complete description of the chancres found over the various parts of the body will have to turn to Clerc.

On reading the diagnostic synopsis upon chancre and chancroid we were scarcely prepared, from Dr. Bumstead's admission, in the first part of his book, of the uncertain views he entertained, and which we have already considered, to find him stating distinctly that the chancre is a constitutional disease, and that the chancroid is always a local affection, and never followed by general infection. We call special attention to this point, because, unless the reader is already well versed in the subject, he is likely to be confused rather than benefited by the description. The section on chancre in the female is merely an abstract of Fournier's views. The experience of some of the German authorities, which differs from that of the French, is not mentioned.

The various chapters on induration of the ganglia, and of the lymphatics, as well as those on general syphilis—an exceedingly questionable term, by the way—scarcely call for much comment. The whole treatment of these points, as compared with the original French authorities, is unsatisfactory.

Dr. Bumstead disposes of the subject of vaccinal syphilis in a single page, introduced incidentally in discussing the question of "What general symptoms (*sic*) are contagious?" and seems perfectly satisfied with a résumé of M. Viennois' articles, which were published in the *Archives Générales de Médecine* in 1860. He leaves the reader to infer that the only danger of communicating syphilis in vaccination lies in the use of lymph tainted with an admixture of the vaccinifer's blood. He utterly ignores the new facts and deductions which were brought to light during the celebrated and protracted discussion of the subject at the French Academy of Medicine, when even Trousseau and Ricord thought it not beneath them to study the matter for its great practical importance, rather than as subsidiary to any mere theory in syphilography. He has, in fact, omitted to give anything like a practical view of the facts in the case; and although, as he might claim, he is not writing for vaccinators, he certainly professes to have made a hand-book for the general practitioner, who, it seems to us, has quite as much need of guidance in vaccination and the principles involved in the possibility of communicating syphilis by vaccinal inoculation, as in the operative treatment of urethral stricture, which will be found discussed sufficiently, for all practical purposes, in every work on general surgery.

The general views of treatment are judicious, and when intelligently carried out by the practitioner cannot but prove satisfactory.

We confess astonishment that our author has never resorted to the hypodermic use of corrosive sublimate. For more than two years past it has been extensively used on the continent of Europe, and it is claimed by Lewin, Liégois, and others, to have afforded most satisfactory results. In discussing syphilization, "the treatment of syphilis by repeated inoculations," Dr. Bumstead has made the semblance of an effort to give a fair statement of the views, *pro* and *con.*, held by the advocates and opponents of this treatment as a curative measure. Although his experience was very meagre indeed, confined to his observation of three cases in the secondary period, he arrives, without any hesitancy, at conclusions which will doubtless attract the attention of many readers. On page 531 he says: "From what I have personally witnessed, and from the accounts of others, I believe it is a very effective method for the treatment of syphilis." On page 532, however, in conclusion, he says: "In short, I feel obliged to subscribe to the opinion expressed by Messrs. Lane and Gascoyen, that syphilization is not a treatment which can be recommended for adoption."

We do not for a moment desire to question the right of Dr. Bumstead to form, and to publish, any opinion that he may choose to entertain regarding the labors of others. We do think, however, that he is badly at fault when he expresses a decided opinion on a subject that he has failed to investigate in a thorough and scientific manner, and this, too, when the evidence was several times offered, but never accepted.

On two occasions, during his recent visit to this country, Professor Boeck appeared before the Medical Library and Journal Association, by invitation and announcement, with cases from the Charity and Brooklyn hospitals; and, after presenting the cases, expressed a desire to afford any one present an opportunity to discuss the curative merits of syphilization. Dr. Bumstead did not avail himself of the opportunity. We went to Brooklyn with Prof. Boeck, and were amply repaid for the journey. The cases in the tertiary stage placed by Dr. Hutchinson under the care of Prof. Boeck, were the most inveterate we ever beheld, —were regarded as perfectly hopeless—and, under the various treatments pursued by Dr. Hutchinson, had for some months been going from bad to worse. Under "the so-called syphilization" the patients at once showed wonderful improvement. This evidence, brought before "The Journal Association" and published in the *Medical Gazette* at the time, is utterly ignored by Dr. Bumstead. The testimony of Dr. Hall, of St. Louis, who has treated more than one hundred cases of syphilis by "repeated inoculations," with the most satisfactory results, and whose letter to that effect was shown to Dr. Bumstead by Prof. Boeck, is also ignored. Dr. Bumstead's conclusions are based on his observation of three cases of secondary syphilis. Had Dr. Bumstead availed himself of the opportunity to witness the result of syphilization in these tertiary cases, he would have been better fitted to have drawn conclusions that might have been of some service to the profession in this country.

On the cutaneous lesions of syphilis—one of the most interesting and important branches of syphilography—we find but twenty-two pages. The consideration not only lacks accuracy and fulness of description, but even the diagnostic features, so intricate in their nature, are entirely overlooked.

The syphilitic affections of the deeper tissues, founded mainly on the researches of Lancereaux, are sufficiently well brought out. Considering the great advances made of late years in our knowledge of brain-syphilis, we can only look on Dr. Bumstead's description as being exceedingly commonplace, and even deficient in the clinical and diagnostic features of this form of disease.

That portion of the work which treats of the syphilitic affections of the eyes is exceedingly creditable, and may be consulted with great advantage.

The diseases of the ear due to syphilis have not, until recently, received that attention from syphilographers and clinical observers which the value of the organ involved should have secured. The chapter devoted to this branch of syphilis throws very little light on the manifestations of specific disease of the ear. It is far behind that on diseases of the eye. The author has neglected entirely to avail himself of the excellent contributions of Schwartze, of Halle, and Stöhr, of Wurzburg. The value of their labors in bringing order out of the chaos that had heretofore existed with reference to the syphilitic lesions of the ear, should certainly have entitled them to some mention in what purports to be a systematic work on venereal diseases. There is little to be said either for or against that part of the work which treats of congenital syphilis.

The general appearance of the book is not creditable to the publisher. The stereotyped plates and the type used show the marks of time. The paper and the printing are scarcely what would reasonably be expected in a work that has passed to its third edition. The illustrations consist of a few wood-cuts from Gray and Phillips, but are mainly furnished by Messrs. Tiemann and Co., the instrument-makers.

We have, in our review, endeavored to be careful and impartial; and while we may at times differ with our author, we do not lose sight of the fact that he has done much towards spreading more correct views on venereal diseases than were prevalent at the time he first appeared as an author.

M. H. Henry, M. D.

MEDICAL AND SURGICAL REPORTS.*

It is exceedingly unfortunate that, in the appointment of attending physicians and surgeons to our public hospitals, no competitive examination or real test of the capacity of the applicants is ever deemed of any consequence by the boards of direction in whom is vested the power of selection and appointment. The system pursued in the English hospitals of canvassing the merits and the validity of the claims of the respective candidates for public positions, is beyond question of the greatest benefit to British medicine and surgery, and has been the means of securing, for the benefit of the public, the best talent in the United Kingdom.

The subsequent opportunities afforded for distinction to a well-educated and competent medical officer are very great. There is no surer road to professional distinction than by way of correct and reliable hospital reports. There are no didactic works on any branch of medicine one tithe as valuable to the physician as the carefully-drawn reports, and the valuable deductions arrived at, from a large number of cases, under the immediate control of responsible persons. It is to be regretted that very few volumes of hospital reports have ever been published in this country. It is, at least, suggestive that too many remained too long in positions they were quite unfitted to occupy creditably. For eighty years the New York Hospital controlled the surgery of the greater part of the city, and, with the exception of a few published cases, the results of this enormous experience lies buried,—and promises ere long to be but one of the things of the past.

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* *First Medical and Surgical Report of the Boston City Hospital.* Edited by J. Nelson Borland, Physician; David W. Cheever, Surgeon. Boston: Little, Brown & Co. 1870.

These reflections were forced upon us when looking over the admirable volume of reports of the Boston City Hospital, just published. Although somewhat beyond the line we had drawn in the extent of our reviews, we are tempted by a desire to acknowledge our appreciation of the labors of our *confrères* in Boston. The major portion of the surgical work of the volume has been done by Dr. Cheever, whose name appears in connection with all the articles, except the ophthalmic and aural reports (by Dr. Williams and Dr. Green, respectively), which are short and chiefly statistical, and a paper by Dr. Sinclair, a very valuable contribution, consisting of detailed statements of twenty-two cases of *peri-uterine inflammation*, and a case of *peri-uterine hæmatocele.*

From the article on *perineal section*, in Dr. Cheever's *Surgical Abstract*, we learn that since the establishment of the hospital the urethra has been opened from the perineum in sixteen cases. Fourteen of these operations were for old strictures, and two for traumatic rupture of the urethra. Eight of the patients were admitted with retention, and seven of these had either extravasation, or perineal or prostatic abscess. Eight of the operations were by Syme's and eight by Cock's method. The results, as regards mortality, were alike after each of the two methods, viz., five recoveries and three deaths. The average duration of convalescence was: after Syme's operation, 121 days; after Cock's operation, 96 days.

Dr. Cheever, while claiming to have first introduced Cock's operation in Boston, in 1867, does not wish to be considered the special advocate of either method, but endeavors, in the following words, to point out the advantages of the direct mode in certain cases:—

"Whenever we can operate on a guide in the urethra, Syme's operation is to be preferred. Indeed, in such cases, it may be an open question whether the patients are subjects for external urethrotomy at all, since the stricture into which a bougie can be passed can be dilated gradually, or forcibly, from within. It is for perineal section without a guide, after traumatic rupture, or in impermeable strictures, especially when there exist extravasation or abscess, that the direct method of Cock is to be considered and adopted. In such cases, immediate relief is urgently demanded, and a thrust into the membranous urethra cannot *a priori* be thought more hazardous than the incisions of lithotomy. We substitute, too, a single clean incision for a prolonged hacking of parts already inflamed, and perhaps sloughing.

"The operation is, however, limited in application. For, in cases of impermeable stricture which have not gone so far as to cause extravasation and abscess, and where, consequently, perineal incisions are not imperative, we may more safely tap through the rectum, or over the pubes, and await, until the urethra has relaxed, before attempting catherization."

"It is only at the last gasp," says Dr. Cheever, "that the miserable victim of stricture seeks the hospital, and among such a class of cases, we regard a prompt opening of the urethra and bladder as the only safe course to pursue." The paper includes a tabular statement of the interesting points in the sixteen cases.

We regret that diseases of the genito-urinary organs have not received more attention from the hospital staff.

The section devoted to the treatment of diseases of the skin is rich in valuable statistics, and shows that the gentleman having charge of this department is a careful clinical observer. It is impossible, at this time, to derive from the carefully compiled details anything like an exact idea of the relative frequency of various eruptions, and their occurrence in certain classes of patients. Very much information can be derived, however, by those interested in dermatology in studying this branch of science as it presents itself in this country. We regret to see that Dr. Damon adheres to the old nomenclature, and in his statistics considers eczema, lichen, and impetigo under different heads, and also in his nomenclature of syphilitic eruptions he follows the very vague and misguiding names used by Mr. Erasmus Wilson.

The contributions are all, however, of great value, and any mere mention is scarcely sufficient, but our space is limited. Dr. Cheever details a case of *reproduction of bone* after removal of nine inches of the shaft, together with the lower epiphysis, of the tibia, and alludes to two others. He adds a synopsis of the five similar cases given by M. Ollier. Besides these, the following subjects receive attention: *Aneurism; The Ligation of Large Vessels; Cases of Cut Throat; Tracheotomy; Foreign Bodies in the Œsophagus; Lithotomy; On the Radical Cure of Hernia; Strangulated Hernia; Fractures; Injury of the Spine; Compound Fracture; Amputation; Pneumonia; Acute Rheumatism; Typhus and Typhoid Fevers.* In connection with these last-named diseases there are many very valuable and statistical tables, showing accurate and painstaking observations. In the article on excisions we notice that in several instances numerical expressions of percentage are, by the insertion of a point before the figures, made to denote erroneously so many *one hundredths* of one *per cent.* We are told, also, that the hip excisions were all done for coxalgia (?).

Under the title of *Displacement of the Upper Jaw*, Dr. Cheever details two very instructive cases, in which he removed *a naso-pharyngeal fibrous polypi* by means of an osteo-plastic resection of the upper jaw. There is also narrated the successful removal of an *encephaloid tonsil* by external incision; and a fatal operation for occlusion of the vagina, both of which are exceedingly instructive.

The work is well illustrated with lithographs, photographs, and some wood-cuts. The chromo-lithograph of urticaria annulata is well executed, but fails, from its small size, to give a fair idea of the appearances of the disease. The lithograph representing syphilitic lichen is merely suggestive. That of herpes iris bullosus is excellent. The book is admirably printed, on the very best paper; in fact, for convenience' sake, a cheaper and lighter paper would perhaps have been better. The volume covers nearly seven hundred pages, and is handsomely bound in cloth. Both the contributors and the publishers deserve the thanks of the profession for their first medical and surgical report of the Boston City Hospital.

M. H. Henry, M. D.

Selections from Foreign Journals.

THE QUESTION OF THE RESORPTION OF METALLIC MERCURY.

BY DR. RINDFLEISCH,

Professor of Pathological Anatomy at Bonn.

TRANSLATED FROM THE "ARCHIV FÜR DERMATOLOGIE UND SYPHILIS," BY DR. HORATIO GOMEZ.

From the importance of the subject no apology is required, if I no longer delay the communication of a number of experiments upon the resorption of metallic mercury, at the same time wishing they might have rendered more decided results than they in fact have done. I have occupied myself exclusively with gray ointment. First, I wished to learn whether it were true, that in inunction cures metallic mercury penetrated the skin. The affirmative answer which Overbeck, in 1861, gave to this question, has at all events found little echo; still, I wished to see it more definitively settled. I have, therefore, already (1864) imitated Overbeck's attempts as exactly as he has prescribed them. "In rabbits, cats, and dogs, a spot on the thigh, breast, belly, or head was smoothly shaved and, according to circumstances, repeatedly subjected to inunction with gray ointment, and, by a firm bandage, care taken that the animals should not lick it." They, however, did lick it. What avails the firmest bandage against the indomitable persistence, well known to all experimenters, with which the above-mentioned animals relieve themselves of any bandage? If it be, therefore, not difficult in this experiment to show quicksilver globules in the excrement, yet this is for me completely meaningless. The quicksilver globules reached the excrement *per os*. There is only one portion of the body which rabbits cannot lick, and which they do not allow to be licked by others, the ears. These are, at the same time, specially adapted for inunction attempts; they can, on both sides, be kneaded and rubbed with the gray ointment, and moreover the cutis is here extremely tender, and the subcutaneous cellular tissue without fat; while the support of the skin by inelastic ear-cartilage facilitates in the highest degree the preparation of a clean specimen, a circumstance which, in removing the difficulty—recognized by all investigators—of soiling the preparation with gray ointment, is of great weight. After the ear has been frequently and thoroughly rubbed with gray ointment, and finally carefully washed with soap, it is separated from the body, and stretched out with needles upon a firm support. Then let a four-cornered piece of skin be cut, the free border drawn over the margin of an object-glass, and then, through a skilful arrangement of drawing away the skin and pushing under of the object-glass, the under surface of the skin is brought to view, without the necessity of touching it with an instrument. Supported by this, as I believe, blameless proceeding, I hold myself justified in the opinion, that not a visible mercury globule either penetrates the epidermis or enters the hair-sacs and fat-glands, which lie entirely transparent and free. The ointment is, moreover, in the inunction, triturated extraordinarily fine. When a fresh ointment from the apothecary is contrasted with one which has been rubbed a few times on the skin, there is perceived an astonishing difference in the fineness of the quicksilver division, and, since upon this feature depends the efficacy of the preparation, it can justly be said that every specimen of gray ointment acquires its proper efficacy only through appropriate friction. Notwithstanding, I believe I have seen and recognized in the finest triturated ointment complete quicksilver globules, and the smallest which I have seen still far from grazing on the limits of visibility. The mercurial globules seized on the upper surface of the horny layer, and were pressed in only so far between the cells of the latter as through the flattened open spaces which arise between these, that is, about to the third cell layers. The rete Malpighii remains completely free, let alone the cutaneous and subcutaneous connective tissue. The repetition of the experiment on the forearm of the dead body, led me to the same entirely negative results.

There remained, after careful washing away with soap and water, small aggregations of mercurial globules in those furrows, which united themselves in groups, and, as such, separated the protruding skin-papillæ from each other. On superficial cuts a less practised person might be led to the opinion that these globules struck into the skin, because they in fact lay pretty deep under the outer level of the upper skin. Bloomberg's method of investigation is entirely unreliable. He stretches and dries the prepared skin of the arm, in order to cut it more conveniently. In the softening of this section many air-bubbles remain hanging in all parts of the preparation, which can so much the more easily be confounded with mercurial globules, the smaller they are. I can accord no importance to a preparation of that kind. To decide the question which presents itself next in order, whether metallic mercury can be resorbed by mucous surfaces, I began my investigations by inserting a small portion of gray ointment into the conjunctival sac of a rabbit, and thereupon closed the lids by several sutures. After this operation the animals rub and brush the troubled eye with such persistency that here, without doubt, a mechanical cause heightens materially the operation of the mercury. The result was constantly a pretty violent conjunctivitis, with marked purulent secretion. The ointment maintained itself properly enough. Probably under the double effect of a higher temperament and the mechanical friction, the lighter melting fat cleft the heavier melting and emulged itself into innumerable oil-drops, which, with the pus-corpuscles and the mucus of the secretion, united together into a milk-white, flocculent, coagulable, slippery, and very voluminous mass. The last enveloped the remaining flakes of firmer fat on all sides, and formed, with them, a whole, which, on the third and fourth day after the operation, immediately gushed out of the again-opened lids. The mercury had for the most part run together into larger globes which were found within the flakes of the said firm fat. The conjunctiva was deeply reddened and swollen, still nowhere deprived of its epithelial covering. A regular well-defined milk-white opacity showed itself on the cornea, which corresponded to the place on which the gray ointment had been placed immediately after its introduction, and at the site of the emulsion above described. The eye and its surroundings were now carefully cleaned and immediately enucleated, and the further examination carried out by a vertical cut and superficial incisions, which were taken from the preparation hardened in glycerine, gum, and alcohol. Through the treatment of the sections by very strongly refracting menstrua, glycerine, rosin, etc., security against any confounding of mercury globules was effected, because they naturally under all circumstances alike remain opaque. The result was entirely negative. I have nowhere been able to discover a quicksilver globule either in the conjunctiva, the cornea, or the neighboring lymph-glands, muscles, fat, etc. I now proceeded to the intestinal mucous membrane. I approached it with the preconceived idea that here at least I should obtain a positive result. Moderate quantities of gray ointment were mixed with potatoes and bread, and rabbits and guinea-pigs fed with the mixture.

Thereupon two-thirds of the guinea-pigs and half of the rabbits died in a short time; the remainder fed on it from 6 to 20 days, evidently becoming thinner during this time; they lost all appetite, and died, without evidencing remarkable symptoms of mercurial poisoning. The post-mortem signs were constant. The cæcum contained large quantities of a semi-fluid dark-green excrement, evolving offensive gas-bubbles. On microscopical analysis, the quicksilver particles of the gray ointment appeared of striking size and covered with a crust of black oxide, which imparted to them a dull, irregularly angular appearance. Also, the firmer-formed balls of excrement in the lower segment of the intestine contained metallic mercury. The mucous membrane was hyperæmic, ecchymotic, swollen, and three folds covered with numerous diphtheritic ulcers of various size, which, in places, extended into the muscular tissue. In the coils of the intestine I did not succeed in demonstrating mercurial globules; therefore the more eager was I in the examination of the mesenteric lymph-glands; for the first glance taught me that here something interesting was to be found. The so-called pancreas aselli (in rabbits) was diminished in diameter to one-third of its normal size, also colored slate-gray, so that I already, with the naked eye, thought to recognize the contained mercury. But in this I was deceived. The gray color depended exclusively upon a pigment corpuscle which had nothing to do with the mercurial globules present, which were sparse and small. But there were still quicksilver globules there.

I had for the first time found in an organ undoubted resorbed mercury. I knew now how resorbed mercury appeared in the organism, and, armed with this critical light, I could proceed with more confidence towards the examination of the liver, spleen, bones, etc. Meanwhile, I remained occupied with the lymph-glands, and noticed with satisfaction that the lymph-corpuscles of the diminished glands were only in part unchanged, but for the most part were attacked with a fatty, granular breaking up. Here there was decidedly a direct and immediate consequence of mercurial resorption. It occurs to me that the small quantities of sublimate which were formed on the upper surface of the quicksilver globules (Voit) killed the cells in the neighborhood and caused their fatty granular degeneration, and I believed that this knowledge would lead to the proper employment of gray ointment. The mercurial globules of the intestinal mucous membrane had really penetrated into the lymph-glands belonging thereto. But had they gone farther? Had they reached the blood, liver, lungs, brain, etc.? The blood, from which I took specimens from different portions of the vascular system, contained no quicksilver globules; neither did the liver, spleen, lungs, brain, salivary glands, kidneys, or bones. Metallic mercury had only invaded appertaining lymph-glands, and stopped there. The mercurial globules acted like those coarse coloring particles which are inserted in the freshly-wounded skin in the process of tattooing. They had invaded the gaping parenchyma of the intestine, also indeed the bottom of the diphtheritic ulcers, and then with the lymph-stream reached to the next lymph-gland barrier. The unavoidable diphtheritic sore constituted the reason why I had received a different response from the intestinal mucous membrane than from the conjunctiva. With these phenomena I was not satisfied. I introduced small quantities of gray ointment by means of an abdominal incision into the peritoneal sac of rabbits, in order to test the permeability for mercurial globules of so tender a serous membrane. But the result was here also decidedly negative. The quicksilver globules had, indeed, in moderate quantities, penetrated through the Recklinghausen's stomata into the lymphatic-vascular network. Here they were found, 24 hours after the operation, mingled with fat-globules, but also after 10–15 days about an equal quantity of them was observed, but they now were no longer surrounded by fat-globules, but by round cells, which gave me the impression, considering the above-mentioned conduct of gray ointment, that the diaphragmatic lymph-vessels had served more as a barrier to the invading constituents of the gray ointment, than as the means of penetration into the parenchyma. At least, in the blood, and in the mesenteric and retro-peritoneal lymph-glands, I have in vain sought for quicksilver globules. In the testicle, at the first glance, I believed I had made a capital discovery. On cutting through this organ, globules of mercury were discharged which were not microscopically small, but of the size of a millet, and larger. But I convinced myself very soon that these balls had descended through the open ductus inguinalis into the tunica vaginalis propria testis. Only the enormous size of the balls claimed my attention, and led me to the opinion already repeatedly alluded to, that, contrary to a very widely-spread idea, and also a favorite view of Overbeek, the metal of gray ointment in being heated even over 30° Celsius, and with comparative rest, is not all formed into emulsion, but, on the other hand, flows together into yet larger balls.

In the abdominal cavity of a rabbit, which died 23 days after the operation, the mercury was found united together in a single large ball, which lay in a correspondingly large hollow space of rather consistent inflammatory exudation, that had formed in the spot of the inoculation. The peritonitis which is produced by the introduction of gray ointment has an entirely circumscribed character. There is formed, around the ointment which is not triturated, in strikingly large quantity, the usual exudation, in rabbits, of thick, cheesy pus, which externally is transformed into a more fibrinous exudation and adhesive inflammation. The fat of the ointment is entirely absorbed, so that after the lapse of a week the remaining quicksilver lump stands opposite to a smooth surface, which is covered with a layer of fatty-degenerated and broken-down cells. Here, also, I saw a similar effect of the immediate contact between metal and tissue, as we have observed it in the lymphatic glands; the protoplasma of the cells immediately acted upon dies away, and the cells resolve themselves into detritus capable of absorption, only that in this case the massive formation of new cells again balances the ensuing loss, which took place in the introduction of the finest mercurial globules into the parenchyma of the lymph-glands. The attempts on the peritoneum were also no way capable of removing my doubt whether quicksilver globules can be taken up by uninjured intestinal mucous membrane. Here, also, they were only in the open cavities of the lymph-vessels on the diaphragm, but not in the serous tissue itself, so much the less invading the organs lying on the other side. I must, therefore, sum up the result of my various experiments thus:—

1. That the metallic quicksilver of gray ointment penetrates neither into the external skin, the mucous membranes, nor, finally, into the serous membranes, when these are uninjured.

2. That on the other hand it penetrates into the open parenchyma of the body, especially into the open lymph-vessels, and into the base of eating ulcers. Upon this last appearance the exceptionally favorable result must be based, which the treatment of indurated, diphtheritic, lupous, and similar ulcers with gray ointment has effected, as I have experienced on many occasions. The smallest mercurial globules penetrate into the bases and borders of ulcers, the firm infiltration is pierced, as with very fine needles; in the immediate vicinity of the globules the cells are dissolved ; but, let the globules reach the bordering sound tissue, and they excite here a powerful and persistent hyperæmia, by means of which the infiltration gradually dissolves, so that in the place of a hard atonic ulcer-base an abundantly purulent granulation-surface results.

REMARKS UPON THE PATHOLOGY AND THERAPEUTICS OF SYPHILITIC DISEASES OF THE NAILS.

BY DR. EMANUEL KOHN, OF VIENNA.

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BY DR. JOHN C. JAY, JR.

THE syphilitic affections of the nails have as yet attracted very little attention. But their pertinaciousness, and the fact that an accurate examination of the condition of the nail very frequently facilitates the diagnosis of the syphilitic diathesis, are reasons why these affections and their remedial agents deserve to be described. We shall not include in this description those primary diseases which have their origin in the inoculation of the virus in the immediate vicinity of the nail, through a solution of continuity of the epithelial layer of the integument. They are exceedingly rare, and are confined to certain classes (physicians, midwives, and nurses), and still more rarely are they of so severe a nature as to involve the major portion or whole of the tissues concerned in the formation of the nail. Nor shall we refer to those affections of the nail which result from ostitis or periostitis of the last phalanx of the fingers and toes, because, as conditions consecutive to the last-mentioned diseases, they belong to the rarest of the late manifestations of syphilis, and are treated of in full in the works on surgery.

We shall only treat of those kinds the cause of whose existence is due to a diseased condition of the skin immediately around and beneath the nail, which condition is exactly similar to that which obtains in the general integument upon other surfaces of the body. And of such kinds we can distinguish three.

I. A long time, frequently many years, after the first manifestations of syphilis, the nails present the following appearance: The nails are tawny, lustreless, and sometimes upon their superior surfaces somewhat ridged. The ridges are longitudinal; sometimes there are little superficial holes or depressions upon the nail, which causes the latter to resemble the section of a dried Spanish reed. The free edge presents a cleaving or splitting of the nail, as if the latter was made up of two or three layers placed one upon the other, or the nail is a dull yellow, thickened, and horny. These changes may concern the whole or merely a portion of the nail; if only a portion is involved, then the anterior always, while the posterior retains its normal appearance, in which case the two portions are separated by a sharp line of demarcation. The integument in front of the free border of such a diseased nail is dry, hard, brittle, fissured, and, even when kept carefully clean, black intersecting lines are to be seen upon it. The disease may remain in in this stage for years. All changes in other organs which have been invaded by syphilis may disappear, and the above-described condition alone remain as the last token of the suppressed diathesis. Occasionally, however, and in particular in cachectic individuals, in children and old people, the nail is thrown off. It first loses its connection with the skin at its root, and finally is attached only with a portion of its under surface to the finger. Beneath it there is developed from the matrix a new nail, which is destined to replace the old one. But this replacement occurs only in those of middle age and in children who are otherwise strong and hearty. The old nail is seen becoming smaller in its antero-posterior expansion, and the posterior border, before regularly acute-angular, is slightly jagged, and in these indentations the substance of the new nail is seen forcing itself, and occasionally portions of this substance are seen pressing up in the depressions behind the posterior border of the old nail, resembling in shape the heads of nails or the segments of small spheres. The remnant of the old nail continues to diminish until it drops off. The new nail then lies bare, bounded upon its free border by the expanded pulp of the finger, which, by the further growth of the nail, is pressed back into its place beneath the latter; oftener, however, there does not occur a gradual waste of the old nail, it does not diminish in size, but remains as a dry, dirty, yellowish, rugged covering to the new nail. With the growth of the latter it gradually loses its subjacent attachment, and then falls off in its totality.

The process may remain stationary in any of these stages for several years, or for life, and in favorable cases the duration of the changes described, which, as a whole, are comprehended in the terms total necrosis or partial exfoliation, require a period of several months. In making the diagnosis of syphilis as the cause of these processes, we must be guided by the simultaneous presence of syphilitic affections in other organs, and whether the above-mentioned changes have occurred synchronously upon several fingers or toes. We must add that this form of syphilitic affection of the nails occurs more frequently upon the finger-nails than upon the toe-nails, and in individuals who do not expose the tips of their fingers to the injurious effects of chemical agents or dynamic forces. On the other hand, the condition of the nails, as we have depicted it, will, in certain doubtful and equivocal cases, be one more ground for diagnosticating syphilis, for it is often found ten or twenty years after the diathesis has apparently been extinguished, and it is for this reason that in every syphilitic patient, or one suspected of syphilis, the condition of the nails should be examined.

II. At the time when exanthemata occur upon different portions of the body, which consist of desquamating papules or of maculæ, there sometimes takes place an inflammation of the matrix of the nail. The furrow of the nail swells and reddens, but the temperature of the end of the finger does not increase. (The last-mentioned fact is characteristic of those diseases of the nails which are caused by syphilis, even though they are accompanied by ulceration; in the ulcerative process following a wound there is always, as is well known, an increase of temperature, but in syphilis only, in exceptional cases, to be spoken of later.) Soon the skin over the swelling begins to desquamate, while the nail undergoes either very little change or becomes tawny, or the previously described appearance obtains, as if its substance had been pierced by a needle at various points. There is but little change of the nail in those cases in which only a portion of the nail-sulcus is affected, which is by no means rare. Without any treatment the shedding of the epidermis ceases, the swelling disappears, and the normal condition re-obtains. To be sure, the whole process frequently lasts many months, but this is not to be wondered at when we remember the pertinacity of a figurated maculous syphilide and that the simultaneous affection of the nail is nothing more than a part and parcel of the disease of the skin. We must also remark, that associated with this affection it is usual to find psoriasis palmaris and plantaris, in which case single plaques are found upon the palmar surfaces of the fingers, and, finally, that the toe-nails are less frequently affected than the finger-nails. The toe-nails are mostly the seat of that third form of syphilitic affection of the nails which remains to be described.

III. The third form of syphilitic disease of the nails runs an acute course in comparison with the other forms, but is, nevertheless, like all diseases of the nails, of no short duration. This form, contrary to those already described, occurs in those individuals who expose their fingers and toes to chemical or traumatic influences, or in whom a combination of both these influences is active in producing a predisposition for the disease in question. As proof thereof, are the observations made in the cases of bakers, workers of metals, those wearing tight-fitting shoes, and those whose occupation compels great activity or much standing, especially when they suffer from hyperhydrosis of the feet.

This form of disease of the nails manifests itself in various ways, but there is always inflammation and suppuration, wherein it differs essentially from the first forms: 1. In cases in which a papular syphilide is spread over the trunk and extremities, with perhaps moist mucous patches upon the genitals; in which iritis and disease of the scalp is present, and in which plaques upon the angles of the mouth, upon the mucous membrane of the cheek and soft palate, complete the picture. In such well-marked cases of severe disease, it is observed that the space between the free border of the nail and the pulp of the finger is filled with blood and a thin or thickish secretion. The nail is tawny, yellowish-brown, or green. Upon pressure it does not become paler or whiter, and has, therefore, lost its transparency. If the secretion be removed by washing, a long furrow-shaped ulcer is seen, which has a tendency to spread on both sides towards the sulcus of the nail; soon this latter also becomes involved in the ulcerative process, and then the excoriated and pus-secreting condition obtains around the whole nail; any attempt to raise up the nail or move it in any way which in the healthy state can be practised with impunity, causes pain and slight hemorrhage; sometimes continual pain is present. If the disease occurs upon the feet, walking causes intense pain—a circumstance which especially compels the working-classes to go into a hospital.

Although a rare occurrence, yet its possibility must be mentioned, namely, that the above-enumerated concomitant symptoms of syphilis may not be present, or are so insignificant, or had occurred so long ago and caused so little inconvenience, that they failed to attract the patient's attention, or are not remembered by him, so that the very marked specific character of the ulcer upon the finger may cause it to be taken for a primary affection; in which case a mistake in the diagnosis, very difficult to be avoided, would be the result, but hardly an error in the treatment. In this stage the disease may remain stationary for months, obstinately defying all therapeutics; finally, however, the secretion of pus ceases, and cicatrization of the ulcerated points slowly takes place. The nail (there are generally several which are affected in this manner, and quite often all of them) is not thrown off. This, just described, is the most frequent form of syphilitic disease of the nails.

2. When, however, ulcerative syphilides occur upon the

skin of the patient,—manifestations of syphilis, which occur generally several years after the primary infection, and early in the disease only in cachectic, broken-down constitutions, or in those affected with some other dyscrasies beside syphilis, or which also occur a few months after the initial lesion in those enfeebled by old age,—then the disease of the nails follows a different course. Then there is developed at the circumference of the nail a large, rapidly-spreading ulcer, or several small confluent ones, which secrete a copious, very offensive, sanious pus. These ulcers are frequently covered by the characteristic grayish, firmly-adherent pellicle. They are surrounded by a well-defined edge, and their surfaces are depressed. They bleed easily when pressed upon, and are, as a rule, very sensitive, and often the seat of continuous pain. They continue steadily to increase in extent, until finally they involve the whole circumference of the nail. The nail becomes loose upon one side, turns upon that side, thickens throughout its whole extent, becomes tawny and friable, and at length only remains attached to its subjacent bed by a small portion of its substance. In the end it is either removed or is thrown off piecemeal, leaving behind an extremely foul, sensitive ulcer with irregular edges and uneven surface-secreting pus. When cicatrization occurs, the matrix of the nail is changed into an uneven scar, at first vascular, but later, colorless; sometimes involving a small fragment of the nail. This process requires many months, and sometimes years pass before the cicatrix ceases to be sensitive to pressure. As a consequence of the destruction of the matrix by ulceration, no nail is reproduced, and only the residue of the old nail sometimes remains as disjecta membra.

Hence disfiguration or complete loss of the nail is the result of that form of onychia caused by ulceration of the matrix of the nail. It may even happen that the ulceration has gone deeper and produced considerable destruction of the tissues, and thereby caused more or less permanent inability of the finger.

3. After the loss of the nail there may take place, in some cases, partial or almost entire reproduction of the same, according as the destruction of the matrix has been more or less extensive. When the redevelopment is nearly perfect, there is produced a thin horny plate, growing out in a forward direction from the region of the lunula of the old nail, which, however, does not equal the old nail either in lustre, hardness, or size. When the reproduction is but partial, there are developed two or three smaller plates, at first surrounded by the ulcerated

surface, but later the suppuration ceases, the plates become larger, meet one another and coalesce, and as they grow in different directions pretty fast (relatively to the duration of the whole process), there results an uneven, irregularly-shaped plate, which covers the end of the finger less perfectly than that which occurs in the cases previously described.

If we review what has already been said, we find a striking analogy between diseases of the hair in consequence of syphilis and those of the nails. In both the loss of connection with the subjacent basis occurs either without a previous ulcerative process, or the apparatus which serves the one or the other as reproductive agent, is destroyed by a severe ulceration, whereupon in the first case, under favorable conditions, there occurs a reproduction of that which has been lost, which in the latter case is impossible. The formation of scales upon the scalp also finds its analogue in that related under II. This accounts for some authors speaking of an alopecia unguealis.

If asked whether the disease we have described is unlike any other, we must admit that onychia syphilitica has no special and unequivocal features whereby it can be distinguished from onychia, the result of violence or paronychia. But the relative frequency of such diseases in well-marked syphilis allows the conclusion that they are also dependent upon the dyscrasia. To be sure, external influences, as, for instance, a certain degree of in-growth, will favor the development of the delineated pathological processes. But these processes would not have been developed by these influences alone, even though at work for years, if simultaneous dyscrasia had not been present—a fact which we learn from observation. In all cases, in making an unequivocal diagnosis, we must be aided by the presence of other symptoms of syphilis, and again by the occurrence of the disease at the same time upon several toes or fingers (most frequently), and finally by being able to exclude, as the sole cause, violence or other injurious agents. On the other hand, we should bear in mind that diseases of the nails, the result of violence or chemical agencies, are met with most frequently upon the finger-nails.

We now come to the treatment for the pathological processes in question.

A constitutional treatment, in whatever way carried out, is of no avail. Ever since the favorable result of a mercurial treatment has served as a means of diagnosis for syphilis, there have been physicians who conclude, from the unsuccessfulness of mercurials in onychia, that this disease had no connection with syphilis.

But not only the treatment by mercurials, but also that by iodine or by vegetable decoctions, is of no avail especially in that form of onychia understood as alopecia unguealis. The local treatment is therefore our sole means of subduing the affection, and in many cases simple water-dressing is sufficient.

Various salves, plasters, and fluid-dressings have been used. Although we can do without them all, and can succeed with occasional cauterization with nitrate of silver, and with careful cleansing of the ulcerated surfaces by means of sponges and hand-baths, and by strapping the finger ends with adhesive plaster, still it is well to know some of the means and formula most in use, for the reason that in the long duration of the disease, the encouragement of the patient requires that there be some variation in the treatment. In the first place, then, hand-baths are used, which contain two drachms of corrosive sublimate, with some sal ammoniac, and sufficient water to immerse the hand. Hand-baths containing one drachm of the iodide of potassium and salves of the white and red precipitates (2–5 gr. to 1 dr.). The finger-ends have been bound up with adhesive plaster, or instead of the emplast. diachyl. the emplast. mercuriale has been used. Such a dressing is sometimes used to retain upon the affected parts a covering of wax. In certain cases the alternative presents itself: Shall the nail be removed or not? When it is noticed that the ulceration round the nail does not improve, but bleeds easily, the nail should be removed, as in such cases it must be regarded as a foreign body, giving rise to irritation. Hence if a new nail does not seem to be developing beneath the old nail, and it is manifest that the latter is keeping up the suppuration, then it should be removed forthwith, otherwise the advancing ulceration will completely destroy the matrix. It will likewise frequently be necessary to remove for the same reason the small isolated horny plate which is developed after the loss of the old nail. Its presence may cause increased inflammation, with swelling of the end of the finger, which then acquires the shape of a drum-stick. the lymphatic vessels become involved, indicated by the red streaks along the limb, the axillary glands swell, and erysipelas and serious constitutional disturbances may occur. These severe features generally disappear after a short time, but they are likely to recur, and there is often no other course left but the removal of the imperfect nail. In that form of onychia without suppuration, and also in those cases of the other form in which cicatrization of the ulcer round the nail takes place, the nail should be left alone, because experience has shown that then the subsequent nail is most likely to resemble its predecessor in size, shape, and quality. Besides these measures, many have advised the wearing of an india-rubber glove-finger, which is sometimes ordered without any other treatment, or in conjunction with some of the above-mentioned means. In order to produce a covering more efficacious in perfectly investing and compressing the finger-end, to be used in cases of alopecia unguealis and where the disease is attended by suppuration, it has been suggested that after wiping away the secretion the parts be painted over with traumaticin, a solution of gutta-percha in chloroform (about equal parts of each), five or six times a day, until a sufficiently strong and thick envelope is formed which clings intimately to the finger. A covering for the finger is made in this manner much superior to the rubber-glove-finger. In this proceeding the following precautions must be observed:—

1. Only a small quantity of traumaticin should be kept prepared, as a frequent opening of the vial containing it causes changes in it which are unfavorable for its use. 2. After its application the patient must keep the finger quiet until the chloroform has evaporated and the membranous covering has formed. After a few days it can be peeled off as a whole. It will be found to smell of foul animal matter, the result of maceration of the epidermis. The process must then be repeated, and so on, until the patient has several coverings which he can use alternately. It is well that those not in use be filled with a solution of caustic potash, 2 gr. to ½ oz. of water, and that they be thoroughly washed in this solution just before they are used. By the continued use of traumaticin upon a tender skin, an eczema is sometimes produced. To obviate this, the healthy skin which will be covered should first be greased; the ulcerated surfaces may also be greased if the application of the treatment should cause severe burning. In this way the afflicted finger is best protected from the deleterious effects of external agencies. This, in conjunction with the fact that this process maintains a continuous high temperature, a constant fermentation, maceration, and increased shedding, and consequently increased reproduction of epidermis and its allied structures, explains the marvellous efficacy of this mode of treatment.

Epitome of Current Literature.

Case of Syphilis, with Disorder of the Nervous System.—Zeissl reports the following case: A woman, forty-one years old, was treated in the Vienna Eye Clinic for phthisis of the cornea and prolapsus iridis. There were, besides, periosteal nodes upon the left tibia and upon the os frontis. Later, synechia of both eyes occurred. Notwithstanding that iridectomy was performed, the patient lost the sight of both eyes. On the 19th of November she was transferred to the syphilitic ward with ulcers upon the scalp. Examination revealed no trace of any primary lesion upon the genitals. There were ulcers, which penetrated to the periosteum, upon the forehead, and also over the left parietal bone. Upon the 4th of December the patient complained of severe pains in the back of the head and in the neck. As the application of cold gave no relief, a sub-cutaneous injection of morphia was made. The patient was taken with convulsions and epileptiform seizures, and all the symptoms grew rapidly worse. Unconsciousness came on with trismus, sopor, stertorous breathing, paralysis of the sphincters, with involuntary discharge of fæces and urine, the latter loaded with albumen.

Upon the administration of the iodide of potassium consciousness returned within a few days, the power of speech was regained, and the convulsions ceased. From the rapid improvement after the iodide of potassium had been given, the author concludes, not only that the affection was syphilitic, but also that no disease of the brain was present, but an affection of the cranial bones. The presence of albuminuria favors the latter supposition.—*Archiv für Dermatologie und Syphilis*, Part III., 1870.

Case of Uncontrollable Vomiting caused by Syphilitic Affection of the Brain.—Duval reports the following case: An officer suffered, in 1864, from an indurated ulcer and constitutional syphilis; in November, 1867, occurred paralysis of the oculomotorius sinist., which was relieved within seventy-five days by a mixed course of treatment. On the 20th of March, 1868, vomiting, generally twice a day, after the two chief meals. Symptomatic treatment was without result. Every fluid or solid was vomited from a few minutes to two or three hours after ingestion. Beef-broths and soft-boiled eggs were retained longest; while drinks, especially when taken in large quantity, were immediately rejected. The vomited matter consisted of food, mucus, and bile; there was a sense of discomfort in the stomach, but no actual pain, no tumor, urine normal, constipation, some disturbance of the sight and hearing, and the skin cold and dry. Ice, Seltzer water, morphia endermically, and purging clyster was ordered. Constant headache, preventing sleep. Bearing in mind his antecedent history, 0.05 gramme of the protiodide, 1 gramme of the iodide of potassium, and a blister to the neck was ordered. As the symptoms grew worse, two days later, 30 grammes of mercurial ointment were rubbed in upon the inner surfaces of the thighs, and a gramme of iodide of potassium in a clyster; the severity of the headache was lessened. After two more days an inunction of 20 grammes in a clyster with 1 gramme of iodide of potassium. In the following six days the iodide of potassium was increased from 1 to 3 grammes, and the mercurial ointment reduced to 1 gramme. Producing a slight salivation; instead of the ointment, the protiodide again 0.05 gramme; headache gradually diminished, likewise the vomiting; appetite and strength increased, and after four months' treatment the patient was discharged, but admonished to continue the treatment for two months. The author does not ascribe the vomiting as a rare symptom of secondary syphilis,—to a syphilitic gastralgia (Andral, Trousseau), but declares it to have been caused by a syphilitic cerebral affection.—*Archiv für Dermatologie und Syphilis*, 1870.

Cases of Gummata Syphilitica.—Neumann reports the following cases: A man, forty-five years old, came to him complaining that the movement of his tongue caused pain, and that his speech was thereby embarrassed. Examination revealed the mucous membrane lining the mouth and upon the tongue, smooth. Upon the root of the tongue there was a slight ulceration the size of a kreutzer, with a slightly congested base. Under the use of a solution of nitrate of silver and the decoct. Zittmani, the patient was entirely well in four months. In four other cases, similar in character, he obtained the desired result by the use of iodide of potassium, caustics, and baths. In the case of S., fifty years old, depositions of epithelial masses manifested themselves upon the dorsum of the tongue, which, during the summer of 1868, increased in size, especially at the edges of the tongue, and made every movement, (talking and chewing,) painful. The whole edge of the tongue, upon the right side, was swollen and thickened; the surface of the tongue was in part smooth, and in part covered with numerous firmly-adherent, yellowish exudation masses, situated in deep depressions; besides these, a large portion of the tongue was strewn with numerous broad-based, wart-like formations. After three months' use of iodide of potassium (gr. quindecim pro die) he had completely recovered.—*Archiv für Dermatologie und Syphilis*, 1870.

Case of Cerebral Syphilis.—Dr. Gregorio Ottoni reports the case of a man, thirty-five years old, who had suffered six months before from ulcers upon the foreskin which had healed spontaneously. Started up suddenly one night out of his sleep as if frightened, and could only utter inarticulate sounds, but retained his consciousness. The third night after, he had another attack, in which he lost consciousness, and had tonic and clonic spasms of the extremities and mouth. On the following day, while at his work, he was suddenly embarrassed in his speech during several minutes, but retained his intellect perfectly, and noticed a certain sense of weight in the right arm; the movements of the tongue were normal; the right pupil somewhat dilated, but otherwise normal. The slight paralyses disappeared after a few hours. He asserted that he could think perfectly well, but when he wished to express his thoughts, he was at a loss for the proper words. When he wrote he repeated the same word several times or wrote another, then became confused, and manifested disturbance of intelligence. Ottoni considered the disease to be situated in the hemispheres, and stated that he thought it to be congestion. Its cause he was led to believe to be syphilis, because the symptoms disappeared upon the administration of iodine and mercury.—*Archiv für Dermatologie und Syphilis*, 1870.

Syphilitic Affections of the Ear.—According to Schwartze, of Halle, who has had a large clinical experience, the following forms of ear disease are seen in constitutional syphilis:—

1. Secondary syphilitic ulceration of the meatus externus or otitis externa syphilitica. At the orifice of the canal is seen a circular ulcer, with a dirty white coating. The lymphatics about the ear were very greatly swelled. Cauterizations with nitrate of silver in substance healed these ulcers. Polypoid granulations, which are to be considered as a local manifestation of constitutional disease, also occur in the auditory canal.

2. Acute catarrh of the middle ear in syphilitic pharyngitis and rhinitis. This was usually found to affect one ear only. The time between the first infection and the beginning of the ear disease, varied between seven months and four years. There

was usually also a pharyngeal ulcer corresponding to the affected side. The beginning of the affection was not always marked, although sometimes attended by severe pain, and in one case attacks of vertigo were among the first symptoms. The osseous meatus near the membrana tympani was frequently reddened. The membrane of the drum was always greatly sunken, its brilliancy increased, and its color changed by a yellowish reflex. Paracentesis of the membrana tympani, in conjunction with constitutional treatment, was of considerable and lasting service.

3. Chronic catarrh of the middle ear, or chronic periostitis. This affection in syphilis is characterized by a very rapid diminution of the hearing. In all the cases the conduction of sound through the bones of the head was, at an early stage, even in young persons, much impaired, or had even entirely disappeared. The results of treatment were unsatisfactory.

4. Paralysis and anæsthesia of the auditory nerve. Schwartze's cases of these affections are exceedingly interesting.

Stöhr, of Würzburg, reports, in an article of much merit, fourteen cases of the formation of broad condylomata in the canal. He considers the syphilitic nature of the growths as unmistakable.—*Archiv für Ohrenheilkunde*, 130, 134, 135. 1870.

A New View of the Origin and Propagation of Venereal Sores.—Mr. J. Morgan, Surgeon to the Westmoreland Lock Hospital, in Dublin, has, for the last two years, treated 1,582 cases of venereal disease, and he makes the extraordinary statement that all his hospital cases of primary sores are, as a rule, sooner or later followed by syphilis, and that, during the last year, out of all his cases, he has only observed two which did not develop constitutional symptoms. He states that the prevailing virus is of the true infecting character, and that it is of an inveterate type. He states that army surgeons have observed the fact that syphilis contracted in Dublin, as compared with other military stations, is of virulent character. By the Report of the Metropolitan Police, the following number of prostitutes were actually known to the police: In 1865, 1,078; 1866, 1,031; 1867, 1,047; 1869, 969. It may be taken for granted that these figures only partially represent the whole number. As an idea of prevalence of venereal diseases, it may be mentioned that 805 patients were admitted, last year, to the Westmoreland Lock Hospital, and besides these, other hospitals and dispensaries have their quota of such diseases. Mr. Morgan has been struck with the fact that among the male patients soft sores, uncomplicated with constitutional syphilis, were exceptionally frequent in proportion to the existence of constitutional syphilis in women having genital sores. He suspected that there was an explanation of these discrepancies either in the transmissibility of sores in diverse forms, or that other sources of contagion existed than the sore itself. The frequent coexistence of a muco-purulent or purulent vaginal discharge, with the early stages of syphilis, afforded to Mr. Morgan's mind a probable solution of the question, to determine which, he made an elaborate series of experiments. The conclusions were, that the product of this discharge from a syphilitic woman is a soft or chancroidal sore, when it is applied under the skin or upon an abraded surface. It is further shown that these sores are capable of almost indefinite propagation under the same form. This vaginal discharge has the remarkable power of auto-inoculation; and Mr. Morgan mentions the case of a highly syphilitic woman, upon whom this matter produced a typical soft sore, from which a similar one was developed in another patient; and what is also very interesting, the initial lesion of the first woman did not yield auto-inoculable pus. Mr. Morgan states that he has, unsuccessfully, inoculated with the secretion from the os uteri, and successfully from the vaginal discharge of the same woman. He has further inoculated, unsuccessfully, with the vaginal secretion from a uterine ulcer, and from the ulcers themselves, without result; also, that he has been unsuccessful with the gonorrhœal discharge in the male.

He states that he has always had, as a result, a characteristic chancroidal sore.

He further states, that the activity of the vaginal secretion varies; being less active before the menstrual epoch, and to take upon one day and not on another. The admixture of blood rendered the result negative. The more robust the patient, the more perfect was the inoculation, and the more persistent and difficult was the ulcer to heal, and every generation increased in inoculative power. The more infected the recipient was, the more difficult were the inoculations, and the greater their tendency to heal; and every succeeding inoculation on the patient's own person, seemed to increase in inoculative power.—*Dublin Quarterly Journal*, August, 1870.

Therapeutical Notes.

On the Local Treatment of Syphilitic Mouth, Nose, and Throat Affections.—According to the experiences of Von Sigmund, the local treatment of the mucous membrane of the mouth and nose is of the greatest importance in syphilis. No complete cure can take place without local treatment; whilst, on the other hand, by systematic purification, the still healthy membrane can be preserved from contamination. Von Sigmund recommends, consequently, that the oral and nasal passages should be thoroughly cleansed every morning and evening, by the injection of cold water into the latter, and by free gargling of the former.

If slighter affections are present, he recommends, as a gargle and injection, solution of alum and extract of rhatany, in the proportion of about 1 to 100 of water, or sulphate of zinc of half that strength. In cases of erosion of the membrane he applies concentrated solutions of nitrate of silver, or still better, of perchloride of mercury, in the proportion of 18 parts to 400 of alcohol, painted over the affected part with a brush; the latter producing a less constringent effect upon the skin. After the application, which should be made before going to bed, a little finely carded cotton-wool should be placed on the part. A piece of blotting-paper, saturated with the solution, may also be applied. He recommends the sublimate also in diseases of the gums. Where the tongue is affected, attention should be paid to projecting angles and rough edges of the teeth, which should either be removed or rendered smooth by covering them with caoutchouc.—*Wiener Med. Wochenscrift,* Nos. 32 and 34, 1870.—*Practitioner.*

Mercury employed Hypodermically in the Treatment of Syphilis.—The memoir that obtained the gold medal in 1868, at the medical congress at Brussels, by MM. Scarenzio and Ricordi, has been translated into French, by M. Oscar Max Van Mons, and from it we learn that these gentlemen have injected calomel suspended in solution of gum-arabic instead of corrosive sublimate (the plan adopted by Lewin and others), with great advantage. They use a Pravaz syringe, and prefer the outer part of the fore-arm or leg, or the lateral portions of chest. On the third day a small abscess forms at the point of injection, which speedily bursts, or may be opened by the lancet, and rarely contains more than a drachm and a half or two drachms of matter. They strongly recommend the adoption of this plan of treatment in all cases of syphilis, but especially in that disease when occurring in infants, pregnant women, and those who cannot take mercury by the mouth, or in whom it cannot be employed by friction. They conclude by stating they consider it to be one of the most precious acquisitions of modern therapeutics.—*Journal de Médecine*, September, 1870.—*Practitioner.*

Iodoform in Syphilis.—Dr. Kennedy recommends iodoform in the form of an ointment for syphilitic periostitis, and also thinks it one of the most delightful remedies to painful burns, sores, chancres, boils, etc., as it allays pain and promotes rapid healing. Two cases of chancre were healed by it rapidly in the form of powder dusted on.—*Practitioner*, May, 1870.

Treatment of Blennorrhagic Orchitis by Lotions of Nitrate of Silver.—About a year ago, Dr. Marc Girard called attention to the use of solution of nitrate of silver of a strength of one part to one hundred of water in blennorrhagic orchitis. He says that while by the employment of other methods from twelve days to six weeks are required, by his treatment the patients are up in from two to twenty-four hours.

Encouraged by this surprising success, the surgeons of the Military Hospital of Gand tried M. Girard's treatment with a success which surpassed their hopes. During the latter part of 1869 five patients were thus treated, by applying constantly upon lint a solution of nitrate of silver to the parts. The pain, in every case, ceased in about twenty-four hours, and the patients, thinking themselves cured, demanded their discharge. The average length of treatment was six days.

It is difficult to state the mode of action of the remedy; we can say that it is not by revulsion, as it does not cause any pain, merely a pleasant sensation of heat, and it slightly discolors the skin. Besides this, the urethritis, instead of reappearing more intensely, seems to have been favorably influenced.—*Archiv Méd. des Belges*, August, 1870.

Treatment of Gonorrhœa with Tannin and Glycerine.—Dr. Schuster states that tannin with glycerine at first forms a soft, waxy substance, which soon becomes hard and brown, and melts in a moist atmosphere at the temperature of the body. Dr. Schuster has formed small pencils of this compound, which he inserts into the urethra of patients suffering from gonorrhœa. He has found the treatment by means of caustic injections (the abortive method) frequently to fail, and that it occasionally produces violent pain, inflammation, and hemorrhage. On the other hand, the treatment with slightly astringent solutions cures the gonorrhœa within a period varying from four to seven weeks, but is often followed by a troublesome gleet. The tannin-glycerine rods employed by Dr. Schuster are from three to four inches in length, well rounded at the extremities, and consist of thirty grains of tannin, one grain of powdered opium, and a sufficient quantity of glycerine to form a pastille. These rods are hard in winter, and soft in summer. Before their introduction, they should be dipped in warm water. They are to be left for from five to ten minutes in the urethra, and then withdrawn. If, however, they be left in for an hour or for a night, more or less pain is caused, and this appears to be due to a combination occurring between the tannin and the mucus or pus, which becomes hard, and acts like a foreign body. Dr. Schuster has had no case of orchitis following the use of these pencils, though he has thought it advisable to recommend the employment of a suspensory bandage; nor has he noticed any irritation of the bladder or prostate. In cases of gleet, a rod may be left in for a few minutes, and speedy cure usually results.—*Lancet*, October, 1870.

Impotence consequent on Onanism Cured by Electro-Magnetism.—Dr. Finstein, of Ulm, reports a case of a man aged twenty-six, who, from the age of fifteen to eighteen, was addicted to onanism, which he relinquished after the latter period by the advice of a companion. At the age of twenty-three he found himself unable to have an erection. Various remedies were tried in vain, and at last electro-magnetism with the apparatus of Erdmann was resorted to, and after fifty-two applications, made twice daily, continued from ten to thirty minutes, his power was restored.—*Revue de Thérapeutique*, September, 1870.

Treatment of Sweating of the Hands and Feet.—M. Devergie remarks, that this occurs not only among those who are negligent, but in those who are most observant of cleanliness. It often causes the sufferers from it to isolate themselves from company, a mode of life which exerts a pernicious influence on the morals of the patient, leading to acts of insanity and even suicide, of which he gives an instance that occurred under his own observation. Sweating of the hands is often associated with phthisis. The question arises, Is it prudent to put a stop to these perspirations? Their arrest may induce a state of languor that nothing will overcome. Anæmia becomes apparent, menstruation ceases, and months, or perhaps a year, is required to re-establish health and strength. The proper treatment is to employ inoffensive means, by which the perspiration may be diminished without being altogether arrested, and amongst them pulverulent remedies succeed better than unctuous applications or fluids, though the use of the latter should not be altogether neglected. The best baths consist of a strong solution (1 to 30 or 40 of water) of common salt, carbolic acid (1 to 500 or 800 of water), and permanganate of potash (1 to 50 or 100 of water). These liquids are at once solvent and disinfectant. They should be used in the morning and cold, rather than in the evening, when the skin is irritable and hot with enclosure in shoes and boots. After the feet have been carefully dried, a powder may be used. This, however, should not consist of the red oxide and sub-acetate of lead of M. Gassard, since this is too active; and the same may be said of those into the composition of which corrosive sublimate enters. The application of pure tannin is much superior in its effects, though sometimes it is somewhat too active, rendering the skin too hard, whilst it does not possess any disinfectant property. Coal-tar is also very valuable, and may be conveniently mingled with starch in various proportions. The powder should be applied with a powder-puff. The shoes should be very light, so as to confine the foot as little as possible.—*Journal de Médecine*, 1870.—*Practitioner.*

Therapeutic Value of Perchloride of Iron and Manganese.—G. Marcacci publishes the history of thirteen cases, in which the local application of a dilute solution of the above salt proved serviceable. Among these cases are five of necrosis of different bones, produced by different causes; a deep, fistulous ulcer in the inguinal region, apparently communicating with the lower segment of the colon; six hydroceles, either simple or complicated, with a tumor of the testes; and a case of dropsy of a hernial sac. In all the cases a rapid cure was effected. In the case of ulceration the solution was applied once a day, or more seldom, according to the degree of irritation produced. In seven of the other cases it was injected the same manner as iodine, and with about the same effects. He believes that the solutions of this salt destroy unhealthy granulations in fistula, and induce the formation of healthy granulations prone to heal; in the case of the necrosed bones it facilitates the separation of the dead from the living bone.

In hydrocele and similar conditions, it provokes reaction, leading to the obliteration of the sac, without causing much pain or too violent inflammation.—*Revista Scientifica*, 1870.

Editorial.

With the present number of the Journal we start on our second year of existence. We have every reason to be thankful to our contributors, our subscribers, and our *confrères* of the medical press for their assistance, courtesy, and kindly attentions to our enterprise.

When we undertook the control of the Journal, we understood thoroughly the nature of the task, and the difficulties to be encountered. We are perfectly satisfied with the results, and we beg to assure our readers that the Journal is established on a firm basis. Every arrangement has been made to secure that end. All we ask, in return for our labors, is a continuance of the same favors extended to us during the past year.

Our aim and ambition has been to establish a Quarterly Journal and Review that shall be of practical value and interest to the American physician and surgeon ; and shall, at the same time, command a favorable place with the continental journals treating of the same subjects.

We have exerted our best efforts to secure original communications from recognized special experts, and the promises we have received speak well for the future.

In our selections from foreign journals we have published *in extenso* only contributions from the first masters in France and Germany, and which were not likely to be reproduced in this country by any other journal.

We purpose in our Clinical Contributions publishing only reports of interesting cases, with short remarks.

In the departments of Reviews, Epitome of Current Literature, and Therapeutical Notes, the same care and attention will be bestowed ; and every effort will be made to place only trustworthy information before our readers.

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OF

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Original Communications.

ON SYPHILITIC AFFECTIONS OF THE EAR.

BY D. B. ST. JOHN ROOSA, M. D.,
Clinical Professor of the Diseases of the Eye and Ear in the University of New York.

It seems to have been decided that scarcely any morbid changes which may occur in the organs of the body, are pathognomonic of syphilis. The copper-color in eruptions, the condylomata in iritis, have ceased to have the importance in diagnosis that was formerly ascribed to them, when they of themselves established the existence of the venereal disease in the patient exhibiting them. In attempting to classify the affections of the ear which may occur in the course of, and which are induced by, syphilis, we must be careful, therefore, lest the impression is given that the various parts of the ear, when diseased, can furnish of themselves any objective evidence of the presence of the venereal poison. An inflamed membrana tympani, which has become inflamed from the poison of syphilis acting upon the blood, looks just like a drum-membrane injected from any other cause. An exostosis of the external auditory canal may show that there was a precedent periostitis, and this may have been caused by prolonged suppuration; but the exostosis is of itself no evidence of syphilis.

I have deemed it prudent to make the foregoing statements, before venturing to arrange the affections of the ear which modern authorities are agreed may be caused by syphilis, lest the title of my paper should mislead.

The affections of the outer ear quite often seen in syphilis, and which may be caused by infection with this disease, are—

Inspissated Cerumen,
Bony growths (Hyperostosis and Exostosis),
Condylomata.

Impacted wax may occur in syphilis for the simple reason that congestion of the skin prevents the free action of the ceruminous glands, just as chronic inflammation of the middle ear, or of the lining membrane, extends to the canal, and produces the same result. Schwartze,* in his interesting historical sketch of our knowledge of syphilitic affections of the ear, quotes Astruc, who wrote in 1740, as saying that the cerumen was infected by the blood, and then became more rigid, and caused irritation and inflammation in the auditory canal. While we may not accept Astruc's pathology, we may believe that inspissated cerumen had been observed as at least one of the coincidences of syphilis.

Hyperostosis and exostosis in the external auditory canal were regarded by Toynbee as characteristic of the existence of a syphilitic or rheumatic diathesis; but my published cases † have shown that this is a mistaken view, and that the periostitis which induces hyperostosis and exostosis in the auditory canal may simply be due to local irritation. That they are especially apt to occur in persons affected with constitutional syphilis is of course not denied, but their presence alone is no positive evidence of the syphilitic infection.

Condylomatous growths frequently occur in the auditory passage. Dr. August Stöhr, ‡ of Wurzburg, has reported fourteen cases, occurring chiefly (in ten instances) among women, and with two exceptions in connection with condylomatous formations on the genitals, in the axillæ, under the breasts and between the toes. Stöhr thinks that the explanation of the more frequent occurrence of the condylomata in the auditory canal among women is, that the ears were covered by the hair, and consequently the natural removal of the wax was not as thorough as among men.

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* *Archiv. für Ohrenheilkunde*, Bd. IV., s. 255.

† *Troltsch on the Ear*, p. 131.

‡ *A. für O.*, Bd. V., s. 139.

Stöhr did not find the auricle affected with the broad condylomata. "Even papulæ, which were often richly developed in the scalp, were not present. This is to be accounted for by the histological structure of the cutis in this part, which, as is well known, has very few glands."

The same author inclines to the belief that many cases of condylomata in the auditory canal heal without treatment, for he found in syphilitic patients cicatrices, loss of the follicular bodies, and absence of the hairs ordinarily found in the part.

The consequences of these formations may be chronic suppurations, and narrowing (hyperostosis?) of the bony canal. They may be mistaken for polypoid growths.

Affections of the middle ear are probably the most common in syphilis, as they are in general. Mr. Hutchinson has evidently classed among the diseases of the labyrinth many cases of trouble with the middle ear, which our increased facilities for diagnosis allow us to detect. I have seen quite a large number of cases of thickening of the mucous membrane lining the cavity of the tympanum which occurred in connection with interstitial keratitis and the notched incisors (Hutchinson's teeth), that were undoubtedly the consequences of the naso-pharyngeal catarrh of congenital syphilis. The membrana tympani was usually sunken, adhesions had occurred between it and the walls of the cavity of the tympanum, and the light spot was either entirely gone or greatly diminished in size. One interesting but disheartening clinical fact was demonstrated to me by these cases, that is, they were never improved by treatment, local and constitutional, but steadily progressed to profound deafness, while the keratitis was usually cured.

The classification in the affections of the middle ear occurring in syphilis is very simple.

Acute Catarrh.

Suppuration.

Chronic catarrhal Inflammation.

The acute catarrh is the "sub-acute myringitis" of Wilde,* the latter term not now being used, since it is generally recognized that the chief lesions are not in the membrana tympani, but in the lining of the Eustachian tube, the cavity of the tympanum, and the mastoid cells. It usually occurs in conjunction with syphilitic rhinitis and pharyngitis, and is a mere extension of such affections. The pain of this affection varies as it does when occurring from other causes, and I think we must reject what Wilde thinks as to there being anything characteristic in the absence of pain. Nothing need be said on the treatment of this affection beyond what is found in the text-books on otology, and yet I cannot refrain from calling attention to the great advantage of paracentesis of the membrana tympani when the catarrh is at its height. It sometimes cuts short the pain, and often prevents the formation of pus.

Suppuration in the middle ear sometimes occurs in syphilis, and is a consequent of the acute catarrh.

Chronic catarrhal inflammation of the middle ear, as we have before said, is the aural lesion that most frequently occurs in syphilis, and it may come on very insidiously, without pain and without tinnitus. Schwartze believes that it often leads to chronic periostitis. Hinton, of London, speaks of specific appearance in the membrana tympani in this affection: 1. Broad peripheral opacity of the membrana tympani; 2. Extensive ulceration of the membrane. But Schwartze has not found these appearances pathognomonic, and I indorse this view. The only characteristic evidences that Schwartze gives are: 1. Nocturnal pains in the temporal region; 2. Very rapid diminution of the hearing power; 3. Early impairment of the conduction of sound through the bones of the head. The first I should reject as not being specific, for it occurs where no syphilis exists, and does not always occur where it does; the second is also, I think, a doubtful pathognomonic evidence. In short, as was said in the beginning, the present writer inclines to the view that the evidences from the ear alone as to the existence of syphilis are as slight as those to be obtained from the iris and the retina. I do, however, regard chronic syphilitic affections of the middle ear as very unsusceptible to treatment, much more so than those occurring from other causes. Schwartze's idea of a periostitis being the final lesion, goes very far to explain this clinical fact.

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* *Diseases of the Ear*, p. 261.

The diagnosis often rests between middle ear and labyrinth affections, and here we find the great value of the tuning-fork. The deafness may be very great to ordinary sounds, but if the labyrinth be intact the vibrations of the fork will be heard with startling distinctness, when its handle is placed on the forehead or the teeth. Undoubtedly, however, the labyrinth is often secondarily involved, but there may be no marked changes on the membrane or in the action of the Eustachian tube, and yet the whole process be confined to the middle ear.

In the cases occurring in conjunction with interstitial keratitis, I have always found the drum-membrane sunken and opaque.

Affections of the Labyrinth.—As has been already said, a primary affection of the middle ear may readily become one of the auditory nerve. This is also the case in all affections of the middle ear. Clinical experience seems to teach, however, that this is more apt to occur in syphilis than where there is no constitutional cause for the local affection, and that it occurs more rapidly. There are also primary lesions of the labyrinth occurring on the course of syphilis. I have lately seen a case at the Brooklyn Eye and Ear Hospital, under the care of Dr. E. G. Loring, where there is paralysis of the facial as well as of both auditory nerves, without any affection of the middle ear. I also saw a case at the Manhattan Eye and Ear Hospital in which there was paralysis of the facial on both sides, profound deafness, and a syphilitic history. Pathology has not done much for us in this department as yet, and any views as to the nature of the morbid processes causing the deafness are purely speculative. Schwartze says, "the anatomical nature of the lesions in primary diseases of the nerve apparatus (of the ear) is as yet entirely unknown." * He reports six cases which he considers to be of this nature. In one case there was paralysis of the left arm, the tongue was turned to one side, but there was no facial paralysis; headache, occasionally vertigo, nausea, and vomiting—syphilitic eruption; 3 years after, without apparent cause, vertigo, vomiting, and sudden deafness in the left ear, which had previously been well. His gait was so disturbed that he could hardly get home from the house where he was spending the evening. Under iodide of potassium all the symptoms, except the deafness and tinnitus, disappeared. Another case was that of a patient 41 years old, who consulted Schwartze, having suffered for 3 weeks from a severe tinnitus aurium, with great impairment of hearing. He also suffered from vertigo and pain in the back of the head; 9 weeks before he had chancre and inguinal bubo. He was then inefficiently treated with mercury. He now has a slight papular eruption, with swelling of the cervical and inguinal glands; nose and pharynx healthy. He heard the watch only when laid upon the auricle, but not when placed upon the mastoid. He could not hear a large tuning-fork placed upon the vertex, but it was distinctly perceived when placed upon the upper incisors. He heard loudly-spoken words at 15 feet. He was much disturbed by sounds in his ears. Compression of the carotids had no influence upon the sounds.

The auditory canals were clear and healthy. The membranæ tympani showed no anomalous appearances that may not be seen on the drum-membranes of persons with normal hearing power. The Eustachian tubes were permeable. No change was produced in the hearing power by forcing air through the tubes into the middle ear.

Diagnosis.—Syphilitic affection of the acoustic nerves.

Treatment.—Heurtloup's artificial leech was applied three times in the next eight days, while the patient took iodide of potassium, and underwent the sweating treatment by means of decoction of sarsaparilla. The symptoms were only slightly alleviated by this course.

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* *Archiv für Ohrenheilkunde.* Bd. IV.

The inunction treatment was then begun, and was continued for 14 days, when he heard the watch ½ an inch on the right side, ¼ of an inch on the left. The attacks of vertigo did not recur.

Eight months after, he heard the watch three inches on the right side, and one on the left, and words spoken in a low tone throughout the room. The tinnitus aurium had very nearly disappeared.

These cases give us a good clinical idea of what a syphilitic affection of the labyrinth may be. We need pathological investigation in this direction, which only those who have access to the post-mortem tables of large hospitals can undertake. It is to be hoped that the necessary labor may be done in our own city.

ON THE STUDY OF DERMATOLOGY.

BY LOUIS A. DUHRING, M. D.,
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Of late the science of dermatology has taken such rapid strides forward, that if we examine the doctrines taught and regarded as true some thirty years ago, we shall find them widely different from those entertained by modern pathologists and investigators. The numerous experiments and observations made within the last twenty years have done much towards clearing away the mystery that for so long a time surrounded these troublesome and often obstinate affections. Thanks to the honest investigations of some of our more recent dermatologists, the science is gradually being freed from the many ambiguities and fears that but a short time ago seemed about to crowd it out of its proper place, and to obliterate it from the list of the sciences. Nor have these advances and discoveries been made without the most diligent and continuous work on the part of men who have devoted their lives to a just comprehension of these diseases,—labor pursued amid a storm of opposition from their contemporaries, a tangle of traditional and erroneous ideas, and a confusion of nomenclature which would daunt any but the most determined. For years past so firmly and securely have false theories and notions regarding the nature of skin diseases been fixed in the minds of men, that time, patience, and the greatest amount of exertion have been necessary to induce people to give up faulty theories, and to credit facts rather than tradition. Moreover, the unfortunate nomenclature handed down to us from our early teachers, with the addition of innumerable alterations and countless accessions, has had to answer for a great deal. This alone has always been a serious obstacle to the advance of dermatology—a stumbling-block that has terrified many, and even dissuaded them from attempting its study. In its present condition, though comparatively free from entanglement and disorder, it still possesses far too many synonyms and doubtful expressions, and until it assumes a more compact and definite form, capable of easier comprehension, progress will undoubtedly be retarded. Even to-day, each country claims its own nomenclature for diseases of the skin, which it defends pertinaciously, caring apparently more for technicalities and words than for some recognized common form, which the whole civilized world can use and comprehend. We need some settled formulary of terms for these diseases, one that all nations can employ and understand; and until one country can converse with another about one and the same disease, using the same terms, or, if that is not possible, terms which always express the same affection, there can be but little hope for a wide-spread knowledge of the subject. In our own land, we see confusion and uncertainty existing, to such an extent that, instead of the mere name, which among scientific men should be ample, an actual explanation of the disease is in many cases necessary. Let us hope that ere long we may look for a reconciliation in regard to this matter, and that we as a nation may possess a nomenclature, simple and uncomplicated, one that shall be intelligible at least to ourselves, if not to the world at large. At the present epoch the student who would become a thorough dermatologist does not content himself with the works of Willan or Alibert, but, with the most recent and comprehensive volumes, finds his way to the clinic of some great hospital, and there at the bedside, under the direction of some recognized master, begins his studies. It is at the clinic, in the wards of a hospital, that a knowledge of these affections is acquired, and in this way only is it obtainable. In entering upon the study of any new field of science, there are certain phenomena and facts which we are compelled to accept as correct before we can proceed; these must serve as a basis upon which to build, and must be accepted on faith, for the time being. Especially is this remark applicable in regard to the study of dermatology. As students, we know a cutaneous affection to be such, and to have such a name, solely and simply because we have been told that such was the case, and have believed it; but advancing in our studies, we find ourselves acquiring the power of diagnosing correctly and of deciding for ourselves. This faculty of knowing how to investigate and study, we have obtained to a great extent from the teachings of our preceptor, and also from our past clinical experience. Nowhere in the study of medicine is the necessity for a master, a thorough teacher, more seriously felt than in the investigation of this class of affections. A reliable and competent instructor is the first step to be taken towards obtaining a knowledge of the subject, and without such aid we shall not be able to secure a firm and solid foundation upon which to work when we are thrown upon our own resources. Perhaps the next point of importance is access to a clinic or hospital, where cases may be seen and examined; for no other method will give the student such a clue to these diseases and their numerous phases as constant contact with patients. It familiarizes him with conditions and appearances that would otherwise be but very imperfectly explained or perhaps altogether lost. The treatment of diseases of the skin should be a matter of secondary importance to the student, bearing in mind that, without first being a thorough diagnostician, capable of embracing the whole course of a disease, his therapeutics, however judiciously advised, can never be effectual. The power of making a correct diagnosis is the key to all success in the treatment of skin diseases; without this faculty, the physician can never be a thorough dermatologist, and therapeutics at once cease to hold their proper position, and become empirical.

Until within a very few years the study of dermatology, as a special branch of medicine, has received but little attention and encouragement in our country, and the lack of hospitals and institutions for these affections has forced students to seek instruction and material in other countries. The various schools of dermatology in Europe have always enjoyed a high reputation, especially those of Vienna, Paris, and London, where this branch of medicine has been taught and studied during the last fifty years. At the present period Germany possesses only one recognized school of dermatology, and this is the Vienna school. Berlin, though it has ever been one of the great medical centers of Europe, has never occupied a prominent position in reference to dermatology, and the same observation may be made in regard to the other cities of Germany. France, centered in Paris, has always taken a warm interest in the study of these diseases, and has contributed greatly to promote the science and elevate it to its just position. England likewise has ever been a good friend of our science, and since the time of Willan has endeavored to maintain and defend his views and doctrines with spirit and zeal. Without referring to the subject as found in other localities, we would state that at the present day the teachings of Vienna, Paris, and London represent the dermatology of Europe, for we see the other countries adopting, with more or less variation, one or the other of these schools as their standard. The views of these three centers differ very much, not only in regard to the theories they hold concerning pathology, but also in reference to the treatment of these diseases. Not to speak of the past, let us take a glance at the subject as we find it taught in these cities to-day, and point out the advantages for study in each, remarking that it is our intention to refrain from all criticism or argument regarding the theories and views which they may entertain, and which tend to separate one school from the other. The dermatology of Great Britain is represented by faithful and earnest workers, and the names of many are well known to us all. Among those who occupy prominent positions in connection with institutions devoted to these affections, we would mention the names of Wilson, Startin, Fox, Anderson, Hutchinson, Fagge, Milton, Purdon, Sims, Squire, and Gee, all of whom have from time to time added contributions to English dermatology, and have shown a cordial interest in the destiny of this department of medicine. Several of the above named have devoted their lives to acquiring a knowledge of these diseases, and through their own enthusiasm have done much towards kindling that of others. As one would naturally imagine, dermatology finds a center in the great metropolis of the world, and it is here that a just idea of the English school is to be acquired. Perhaps one of the greatest advantages that London presents to the dermatologist, is the opportunity of seeing an almost endless number of cases, and thus becoming acquainted with some of the rarer forms of disease. The material collected from a population of three millions necessarily brings together interesting and rare diseases, and by seeking access to several of the more extensive institutions, a large proportion of unfrequent affections may be seen. London possesses many institutions for the treatment of cutaneous affections, the majority of them being dispensaries, though they often bear the name of hospitals. The want here of a large hospital supplied with a number of beds, has always been an impediment to research and investigation, and especially unfortunate has this want proved for those who would study these diseases in all their aspects and changes. Dispensary service is eminently valuable for the opportunity it offers for seeing cases and making diagnoses, but the results obtained in the treatment must, as a rule, be received with caution. A service of this kind, where cases come and go at will, often very irregularly, using and abusing remedies, as the case may be, can never present the same definite results and statistics obtainable in hospital practice. Nowhere in London does there appear to be regular and systematic clinical teaching, and this need perhaps constitutes the great drawback to the study of dermatology in this city. Many of the institutions accumulate abundance of material, but there is no provision made for the student to receive elementary instruction, he having to depend almost entirely upon his own observations for information and improvement. Neither does the investigation of these diseases in these institutions receive the time or attention requisite for their full comprehension. Superficial examinations doubtless in most cases arise from the fact, that too little time is appropriated for the number of patients seen, but at the same time this neglect does not betoken the earnestness necessary to a thorough understanding of the subject. London lacks a system of study which would comprise a thorough course of lectures accompanied with clinical teaching, and a hospital where students might study under experienced masters and follow up the science in its numerous details. Until such a change is brought about, it can never take an equal rank, as a school of dermatology, with other countries.

Unlike London, this department in Paris is centered under one roof, in the great "Hôpital St. Louis," a venerable institution that has assisted the studies and investigations of such men as Alibert, Biett, Schedel, Gibert, and other eminent dermatologists. The St. Louis contains about six hundred beds devoted to diseases of the skin, under the direction of six attending physicians, who appropriate two or three hours daily to their wards, assisted by their "internes." In connection with the hospital there is an immense dispensary service every morning, numbering upon an average one hundred and fifty new cases. The most interesting and grave of these diseases supply the hospital with material; the rest are either treated as dispensary patients, or are given advice and dismissed. This is the largest hospital for skin diseases extant, and by far the largest dispensary service in Europe. The material collected at the St. Louis is varied and very extensive, embracing all of the commoner varieties of disease, and many of the rarer forms. Although the opportunities here are of great value, comprising the immense hospital, the collection of cases almost without number, the easy access to the patients and their examination, yet the want of clinical instruction is here too, as in London, seriously experienced. The student is thrown upon his own resources, and can obtain knowledge of the subject by close attention and observation alone, for there are but very few regular and systematic courses of teaching. The "*corps dermatologique*" contains many men of eminence, and some who have obtained a well-earned and merited reputation. Connected with the St. Louis we find MM. Bazin, Hardy, Lailler, Vidal, Hillairet, and Guibout, while the names of Devergie, Cazenave, Ricord, Fournier, Rochard, Diday, Dron, Rollet, and Doyon, are all identified with this specialty in France. In some respects the hospitals of Paris have no equal for the study of cutaneous maladies, and provided the student have already acquired a knowledge of the subject, and is capable of pursuing his studies alone, the St. Louis is a grand field.

In Vienna all the medical sciences are much more divided and subdivided than elsewhere. Here the various specialties, grounded upon a true and solid foundation, are worked and investigated to the finest degree, and here it is that specialties assume their proper shape, and add science and renown to the profession. Among the many branches of medicine, dermatology holds a conspicuous and prominent place, and is studied with a zeal and earnestness such as is rarely seen elsewhere. The Allgemeines Krankenhaus has been the seat of dermatology for many years past, and more especially has it assumed such an important position since the researches of Hebra have been made public. With the discoveries of this thorough dermatologist the study took a new life and stand in Germany, steadily developing, until it has reached the position we now behold—one of the most definite of the specialties of medicine. The department for skin diseases at this hospital contains a number of wards with accommodation for about two hundred patients, the whole being under the immediate supervision of Professor Hebra. For the student who wishes to pursue dermatology, a plan of study is arranged; and, beginning with the anatomy of the skin and the elementary details, he gradually works his way up, with the assistance of able teachers, to a position that will enable him to proceed alone. Systematic lectures and clinics both for the beginner and the more advanced student are continually being given, and pains taken to meet the desires of all. Courses of instruction are even provided for those who may wish to study specially the diagnosis, treatment, or pathology of these affections, affording an opportunity of becoming intimately acquainted with all the minutiæ of the subject. The superior advantages offered in Vienna for the study of these diseases are unsurpassable, and the student who would thoroughly grasp the subject can find no better school and place to begin his work. Here he will find himself able to procure a foundation upon which to build when thrown upon his own resources, and without which enthusiasm would be fruitless and time wasted. The lively interest shown in dermatology throughout Germany is patent enough to us all, and the well-directed and earnest labors of such dermatologists as Hebra, Auspitz, Pick, Köbner, Neumann, Kohn, Veiel, Biesiadecki, Zeissl, Sigmund, Lindwurm, Rindfleish, and many others, must make us mindful that the science here is steadily assuming greater proportions, and well deserves the reputation she has earned.

The treatment of diseases of the skin has passed through so many severe ordeals and diversified experiences, throughout the world, that, until quite recently, it has been in a most deplorable condition. From time immemorial the number of remedies employed for the cure of various diseases has been so great, that an enumeration would be an utter impossibility. Specifics without number, for all diseases, have from time to time been vaunted, the majority of which, when fairly tested, have failed utterly. Certainly no class of affections has been subject to such abuses through the inordinate prescribing of medicines, many of which have apparently been given only in order to swell the roll of prescriptions. The honest examinations of some of our dermatologists, however, have cleared from our list many of these alleged remedies, and in their place we have the plain truth that as yet no positive specifics have been found. The plan of treatment pursued in the three schools alluded to, is very different in many particulars. Whether it be that a dissimilar plan of therapeutics is absolutely required for distinct countries, or that one school is in advance of the other, is a question that experience will decide. As before stated, some of the diseases certainly do appear to assume a milder aspect in one country than in another—thus calling for a less severe method of handling.

To refer to typical diseases, it is noticeable that the same affection takes on an unlike course in various countries and among separate nations. For instance, if the well-known and distressing disease, Lupus Vulgaris, is examined in Austria, and again in France and England, as a rule, a marked difference in its course, gravity, and termination will be observed. This malady, so common in Austria and the southeast of Europe, particularly in the Danubian provinces, where it may be seen in its most virulent form, is a type of disease markedly local. In no other countries are such obstinate and severe cases of this unfortunate disease to be found. The Lupus, both of France and England, bear very much the same characters and course. Here it is a comparatively mild affection, and amenable to treatment; but in Austria it is often most desperate. In the latter country it is not at all uncommon to meet with cases of twenty years' standing, often involving the whole face, back, and limbs; at one time stationary, and again spreading with fearful ravages and destruction of tissue. To account for this difference of degree and form in diseases occurring in these countries, it is necessary to look into the conditions of life. For, social standing, mode of living, and diet, must all play an active part in the evolution of such cutaneous affections, and the cause of this difference is doubtless to be found among the above-named influences. Noticing these peculiarities in certain districts, we are enlightened partially as to the discrepancy in treatment between several of the schools; but this should be only one of degree, and not affect the method. Selecting diseases which run their courses the same in all countries, we shall find that even in regard to the treatment of these, the views of the three schools are at variance. The German school, with Hebra at its head, deals more with facts than theories, and relies more upon experience in reference to treatment than upon speculation. It argues that as yet the cause of most of the diseases of the skin is too obscure to admit of a rational internal treatment, with a view to a positive result; and consequently, with very few exceptions, medicines acting as specifics are entirely ignored, dependence being placed upon other and more sure methods of cure.

The school of Hebra maintains that the direct and exciting cause of a disease should at once be sought for, and if found, receive the treatment adapted to its needs. But in addition to an internal treatment that may be adopted, it insists upon a vigorous and systematic plan of external treatment as well. In cases where the cause of a disease is unknown, the whole attention is devoted to external therapeutics, and certain changes are brought about which tend to ameliorate, if a cure be impossible. In many cases it looks upon these affections as simple disorders of the integumentary system—*i. e.*, not as constitutional or diathetic diseases—and as such gives them a purely local and external handling. The plan pursued for the cure of cutaneous disorders by the Vienna school is undoubtedly more simple and rational than that of any other, and the benefits derived therefrom speak for themselves.

The French school ignores totally the methods practiced by other nations, and upholds its own doctrines with great pertinacity. It claims that the majority of these disorders are the results of a diathesis, by which is meant some peculiarity of the economy which predisposes to certain eruptions, and that the therapeutics should be directed against the disease internally; it, however, also advises external treatment, but of such a feeble character that scarcely any effect is produced upon the skin. Again, great results are anticipated from baths, both simple and medicated, while emollient dressings, poultices, and bland ointments, constitute a feature in the list of remedies employed.

The English school still adheres closely to the doctrines expounded by Willan in the latter part of the last century. The truths that were announced at that time in reference to many of these diseases, are unquestionably as correct and valuable now as then; at the same time it must not be forgotten that science has, in the intervening years, taken many strides forward. The views of some of the English writers of the present day are by no means in accord with recent study and research as pursued in other countries, and many adopt their own ideas and theories with a complacency somewhat startling to progressive and generous minds. External treatment is considered almost useless and often unnecessary. Internal medicines and remedies are relied upon to an unlimited extent, and upon these it depends mainly for the cure of such diseases. To be just, we would wish it understood that the above remarks apply to the London school, as unmodified by association with Continental ideas.

To sum up, undoubtedly all three centers offer great attractions, and for a correct understanding of the subject, we should deem a visit to each essential. For in each of the countries, situated as they are at some distance from one another, and surrounded by the various influences of climate, habits, mode of living, etc., we notice distinct aspects of one and the same disease. This fact is forced upon the attention of every scientific traveler, although any attempt at special description would be unsatisfactory.

Concerning the study of dermatology in our own country, a wide field at once opens for discussion, from which we would withhold for the present, remarking however, that though in the past very little interest has been shown in the subject, of late the establishment in our cities of separate institutions and departments connected with our hospitals, tends to show that the proper spirit has been awakened. Let us anxiously await the period when our nation shall claim a school of its own, a true and honest eclectic school, including the good points and sound theories selected from our European friends, together with the results of our own investigations and labors.

Clinical Contributions.

THE PROTECTIVE INFLUENCE UPON THE FŒTUS OF ANTISYPHILITIC TREATMENT DURING PREGNANCY.

BY CHARLES C. LEE, M.D.,
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In the July number of this Journal for 1870, the writer reported at some length a case of congenital syphilitic Pemphigus, in which the specific virus was impressed upon the fœtus without contamination of the mother.

The marriage of a healthy woman with a man who had, two years previously, had chancre and secondary symptoms, was followed in four years by two miscarriages and the birth of a living child so enfeebled by syphilitic cachexia, that it died in twenty-four hours. A carefully conducted autopsy showed the liver and lungs to be saturated with syphilitic deposits. Within three months after this the mother again became pregnant; and, as the case has remained under constant observation, its subsequent progress has been thought worthy of record.

Both parents being extremely anxious to have a living child, the fact of another pregnancy was no sooner known than the mother came to me for treatment, the necessity for which had been impressed upon her mind at the time of her last confinement.

She was at once placed upon the "mixed" internal treatment of biniodide of mercury and iodide of potassium; ten grains of the latter to be taken thrice a day, with the addition of one sixteenth of a grain of the biniodide at mid-day. This was in May, 1870, but removal to the country in June prevented her from taking the medicine regularly for three or four months; and it was only in October, when five months pregnant, that the treatment was honestly begun and continued. The same prescription was resumed, but the mercurial was ordered to be taken thrice daily until the gums became tender, as the fœtal movements were feeble for the period of gestation, and it seemed desirable to impress the child as rapidly as possible.

Nov. 15. The patient returned with the gums a little tender—no mercurial fœtor—general health and appetite improved, and fœtal movements decidedly stronger. The mercurial was stopped, six grains of the iodide of potassium alone being continued in a mixture of Huxham's tincture and gentian after each meal.

Dec. 1. The patient again reported for examination; general condition of health good—soreness of gums disappeared, and the mercurial was therefore resumed in doses of one sixteenth of a grain of the corrosive chloride at mid-day, with ten grains of the iodide morning, noon, and night. Tepid baths and more liberal exercise in the open air were also enjoined.

Dec. 20. Fœtal movements still very strong and active, but the patient is rather anæmic, with a tendency to occasional diarrhœa, to check which and to enable her to continue the mercurial, muriated tincture of iron was given before each meal, the iodide being also continued as before. With this course of treatment she persisted faithfully for the next six weeks, and early in February, 1871, was confined.

The labor was normal, and the child was a fine healthy boy, weighing 9¾ lbs. The most careful examination that I could institute failed to reveal the slightest evidence of syphilis; and, up to the present date (six weeks after the birth), no symptom of a suspicious nature has occurred. As the researches of Diday and Victor de Méric show that, in the vast majority of cases, the symptoms of congenital syphilis develope within the first month, it is fair to infer that this child has escaped contamination; and it is equally fair to conclude, from the family-history, that this result is attributable to the specific treatment steadily pursued during the period of gestation. It need only be added that in this case the mercurials were given by the mouth, as the patient refused to use inunctions, and was unable to manage the mercurial fumigation.

TWO CASES OF SYPHILITIC SYNOVITIS OF THE KNEE-JOINT.

BY R. W. TAYLOR, M. D.,

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Ellen G. English, aged 22, never having had rheumatism or gonorrhœa, nor had her family suffered from rheumatism, had the initial lesion of syphilis in 1867, which was followed in a little more than a month by a roseola and a general papular syphilide, and severe rheumatoid pains. These manifestations yielded to treatment in about a month, and she had no other symptoms, to her knowledge, until two years after, when she complained, at first, of pains along the subcutaneous surface of the tibiæ, the pain being more severe in the left tibia. At the same time also she had pains in the vicinity of the larger joints. There was no febrile movement, and the pains were very much worse at night. In a short time she noticed that the pain became excessively severe in the left knee, and that, although it was somewhat painful during the day, it became of an excruciating character at night. When she moved the leg she said that the pain was not increased, nor did slight concussions, which brought the articular surfaces in forcible contact, cause any unusual uneasiness. At the same time she noticed that the tibia of the left side was more tender to slight than to firm pressure. The knee-joint gradually and slowly enlarged, the process being, however, unaccompanied by any appreciable heat. This effusion lasted several months and then somewhat subsided, and finally was not to be noticed. The pain remained in the joint for some time, when it again slowly enlarged. The swelling was of an intermittent character, and within a month it could be observed, according to the statement of the patient, that the circumference of the knee varied within considerable limits. The swelling sometimes became acute, then again it would follow a chronic course. When the knee became acutely swollen, she observed distinctly that it was much more tumefied on each side corresponding to the inner and outer borders of the rectus tendon and corresponding borders of the ligamentum patellæ. During the whole time, which was in all six months, she was not confined to bed, but could walk with more or less difficulty, and did not use any local applications, but took some medicine internally.

She came under my observation in July, 1870, and then complained of rheumatoid pains in the tibia and a swelling and pain in her left knee. Upon examination I found that there was considerable effusion into the joint, but with no tendency to flexion, however slight. The articular surfaces could be crowded together without pain, and when pressure was made upon the outer surface of the heads of the femur and tibia, a very slight pain was felt. Spontaneous pain was felt during the day, but worse at night. I could not discover, even though I carefully sought for it, any evidence of thickening of the synovial membrane described by Richet, though I thought that although there was no marked tendency to gummy deposits, the chronic course of the lesion might have produced that result; still it is very difficult, in the tumefied state of a joint, to determine this fact, and the thickening would necessarily have to be very considerable in order to be discovered through the integument. Taking into consideration the history of the case, I concluded that it was that form of white swelling described by Richet and Follin, as produced by syphilis, and placed the girl immediately upon antisyphilitic treatment, giving her twenty grains of the iodide of potassium with the eighth of a grain of the bichloride of mercury three times a day. The immediate result was to alleviate the rheumatoid pains and allow the patient to sleep comfortably at night. Very gradually the swelling subsided, and in three months after, the knee had resumed its natural size, and locomotion, which had been slightly interfered with, was again perfect. During the whole time she had simply used internal treatment, and did not, although advised to do so, spare the knee at all. She remained free from any syphilitic symptom until early in the present year, when she again had rheumatoid pains through the body, with others of an osteocopic character along the tibia, which was slightly swollen upon its internal surface. She was again placed upon the same treatment as before, and very soon lost her pains, and the node upon the tibia subsided. She had also had fugitive pains in the knee and hip, but neither joint was at all impaired.

The lesion in the knee-joint of this patient was evidently in the synovial membrane, as evinced by the effusion and pain; and from its distinct syphilitic history, there can be no doubt but that its origin was in syphilis. This lesion occurs late in the secondary or any time in the tertiary period, and is due to inflammation or gummy deposit, or both, in the subsynovial connective tissue. This deposit may be very copious, as shown by Richet, Follin, and Lancereaux, and then it will so much thicken the synovial membrane that the fact is readily perceived upon clinical examination. When the deposit occurs in the ligamentous fringes of synovial membrane of this joint, its integrity might be compromised if a proper treatment was not instituted, and Follin refers to a case in which the deposit was so copious, that it was mistaken for one of fungus disease of the joint, and a surgeon proposed an operation; but as an antisyphilitic treatment was adopted, the lesion in the joint was cured. There can be no doubt that, although in the tertiary period the lesion is a deposit of gummy material, the same effusion may be due to the simple inflammatory action of the syphilitic virus in the later portions of the secondary period, producing an effusion into a joint in the same manner as it does in the synovial sheaths of tendons. This simple inflammatory action of the syphilitic virus, unattended with gummy deposit, probably also accounts for the rheumatoid pains, they being produced by inflammation of the fibrous structures of joints, muscles, or bones. Then in cases of the tertiary or gummy period we have a regular deposit: as a result of either the membrane may be thickened. These lesions are in the main readily amenable to treatment. The same lesion is said by Richet to coexist sometimes with an osteitis, but in the majority of cases there is no lesion of the bone near the joint, although it may coexist with periosteal thickening elsewhere, as it did in this case, and in others with true nodes. The symptoms of my case are similar to those considered by Richet and Follin, as diagnostic, viz., slow and intermittent effusion, dull pain, not increased upon pressure, but worse at night, and not materially increased upon locomotion, with absence of any change in the integument, and any preternatural heat. In cases observed by Richet, Follin, and Lancereaux, the lesion has always attacked the knee-joint.

Case 2. M. M., American, aged 36, had the initial lesion of syphilis in 1859, which in due time was followed by regular secondary lesions. These latter persisted for about one year, when they disappeared and he had a respite until 1868. In the interval he does not know that he had any cutaneous eruption, and did not suffer from pains. In 1868 he was attacked by rheumatoid nocturnal pains in various parts of the body, which were very persistent. He had also mucous patches upon the lips, which yielded to treatment. In July, 1869, he was again attacked by the pains, which finally located themselves in the shafts of both tibiæ, and the patient described his suffering as being terrific, especially at night. He came under my observation in September, 1869, and was then suffering from pains of an osteocopic character in the tibiæ, upon which I discovered several large hard nodes. At this time the pains had fixed themselves in these bones, and were not of the fugitive rheumatoid character. Besides these nodes, I found that the right knee-joint was very much swollen, and there was evidence of considerable fluid in the joint. He stated that the knee had swelled gradually within two months, and that his attention was first called to it by the pain, and in a week or two he discovered that it was slightly swollen. There was then an entire absence of heat, and after remaining slightly swollen it gradually swelled again a little more, then remained a short time in that condition, and then swelled again; and when first seen by me the swelling was very extensive. Firm pressure upon the articular surfaces in any direction did not produce acute pain, but still produced an uneasy sensation. Though the joint was so much tumefied, the patient, who was engaged in mercantile pursuits, went to his business daily and hobbled around with the aid of a crutch. The pain was of a dull character during the day, and was not much, if at all, aggravated by walking, but became intense at night. Careful palpation plainly showed that the synovial membrane was much thickened; this could be well noticed over the four cushions, or those more prominent portions of the tumor on either side of the rectus tendon above, and on either side of the ligamentum patellæ below. The knee was very slightly flexed. Besides the articular and osseous lesions he had an extensive and well-marked palmar psoriasis and a large mucous patch upon the left labial commissure. He had been taking, as I ascertained by seeing the prescription, five grains of the iodide of potassium with about the thirty-fifth of a grain of the bichloride of mercury. I increased the dose of the iodide to fifteen grains, and the mercury to one tenth of a grain. The mucous patch was penciled with nitrate of silver, and the nodes rubbed every night with an ointment of iodide of potassium. The patient experienced immediate relief of his pains by taking the medicine, but fully four months elapsed before the knee-joint became much reduced in size. The nodes gradually subsided. The palmar psoriasis was especially inveterate, but finally yielded to the mixed treatment which I had placed him upon, and also to the topical use of an ointment of nitrate of mercury of one half the officinal strength, with which was combined oil of cade in the proportions of two drachms of the latter to one ounce of the former. The patient, when I saw him in the early part of January, 1870, was much improved, and he then passed from my observation until early this year, 1871, when I found that his knee was in its normal condition, and had been so for nearly a year, and that he attributed it to the persistent use of the medicine which I had prescribed and of which he told me he had taken increased doses, so that he took about twenty grains of the iodide and one eighth of a grain of the bichloride three times daily. He had not had any syphilitic manifestations in the meantime. He never had pains of rheumatic character until after he contracted syphilis, and his family never was troubled either with rheumatism or gout, nor had he suffered from gonorrhœa for many years prior to the appearance of the synovitis in the knee.

In this case the usual clinical history of syphilitic synovitis is well shown. The lesions in the bones and joints were more profound than in the first case, and it is probable that there was gummy deposit in the subsynovial connective tissue, but the synovial ligaments of the joints were probably not much infiltrated. The early and active antisyphilitic treatment probably modified the course of the lesion very much for the better. The appearance of mucous patches in the tenth year of syphilis is interesting, as showing the inveterate character of these contagious lesions.

Reviews.

KOESTER ON EPITHELIAL CANCER.*

Dr. Koester was formerly the pupil and is now the assistant of Prof. v. Recklinghausen in the Pathological Institute at Würzburg. As a microscopist his name is well known in Germany. In a pamphlet with the title which we have given, Dr. Koester propounds an entirely new theory with regard to the origin and development of Epithelial Cancer—a theory which is certainly plausible, and which has already found much favor in the sight of histologists. What anatomy is to the surgeon, histology is to the dermatologist, and what the former gains from gross dissections, the latter can hope to acquire solely by the aid of the microscope. Microscopical investigations, therefore, of a subject so important as Cancer, must needs have a special interest for dermatologists, and when these investigations have been so carefully and minutely carried out as is shown in the present treatise, the results deduced from them seem to be worthy of more than a passing glance. The recent examination of several cases of "Rodent Ulcer" occurring at the Massachusetts General Hospital, in Boston, tends to corroborate Dr. Koester's views. These views are, that Cancroid, or more properly Epithelial Carcinoma, since Koester recognizes no distinguishable difference between "cancroid" and cancer, is "developed from the lymph-vessels, and even from the epithelium of the lymph-vessels without participation of the connective tissue."

Originally the lymph-vessels were considered as hiding-places for primary cancer, or, more recently, as paths for its dissemination. The nearest approach to a reference to any direct relation between cancer and lymph-vessels is perhaps where Virchow (*Archiv*, Bd. I. p. 118, 1847), cites and criticizes some passages from Broussais's *Histoire des Phlegmasies*, though even here it is doubtful if Broussais refers cancer to an inflammation of the lymph-capillaries. The first to actually point out the real connection between cancer and the lymph-vessels was Recklinghausen, in Graefe's *Archiv für Ophthalmologie.* He assumed that the cancroid cylinders (cancroidzapfen) might be only the club-like swollen ends of the lymph-vessels filled with cell-proliferations from the connective tissue, or a mixture of these with proliferations from the epithelium of the lymph-vessels, or even the latter alone; and more recently, in a discourse delivered before the physico-medical society at Würzburg, he no longer restricts his hypothesis to the endings alone of the lymph-vessels. He at the same time called attention to the anastomoses of the cancroid cylinders and to their cavities (Lumen) here and there recognizable—facts naturally very favorable to his hypothesis.

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* *Die Entwicklung der Carcinome und Sarcome*, von Dr. Karl Koester, Assistent des pathologischen Instituts zu Würzburg. Erste Abtheilung: Krebs der Haut (Epithelialkrebs), alveolarer Gallertkrebs des Magens. Mit 4 Tafeln Abbildungen. Würzburg. A. Stuber's Buchhandlung. 1869.

This theory, while meriting due consideration, must not, however, be at once accepted without a careful examination of its merits, for its establishment would be fatal not only to the theory so long current that carcinoma is developed from the glandular organs of the skin (*Thiersch Ephithelialkrebs*, p. 18–20), but also to the more recent theory of Virchow, espoused also by Weber, Förster, and at first by Billroth, viz., that cancer is developed from the connective tissue. We must, therefore, examine first the results of Koester's experiments and then draw our own conclusions.

His observations have been made upon about 40 cancers of the skin, either fresh, or hardened, or treated with silver, generally in all three ways, and in the most scrupulously careful manner. The microscopic appearances in cancer of the skin are: 1, variously formed bodies composed of epithelial cells; 2, a stroma of connective tissue containing vessels, in which stroma the epithelial bodies are imbedded. Where the former can be picked apart into cylinders, the "onions" are often lacking, and the cancer-cylinders consist of smaller, more succulent, polygonal, flat or cylinder cells. These are best shown by cuts into the youngest part of the tumor, viz., the periphery, and horizontal, not perpendicular to the surface as is usual, and we then see that the cancer-bodies are not isolated in the connective-tissue stroma, but connected so as to form a net-work. To obtain this picture, use a strong power and avoid the use of alcohol and carmine, as these alter or render invisible the most recent cell-proliferations, the most delicate and the most important. These cell-cylinders Koester considers to be changed or thrombosed lymph-vessels. The anastomoses are constant if sought as is here directed. Some cancers, especially those of the eyelids and conjunctiva, will show the anastomoses no matter in what direction the cuts are made. The flat epithelial cancers, the so-called ulcera rodentia, are the best adapted for examination ; the least adapted are the fissured cancers of the lips.

These anastomosing cell-cords give immediately the impression of lymphatic net-work. They are of variable thickness, with swollen and knot-like expansions, meandering in their course, and often separated longitudinally by a small artery, as is the case with lymph-vessels. Thick and thin cylinders unite or branch, and where several branches meet we see the characteristic expansions. In many of the cords we notice also a central channel or cavity (Lumen) with a regular cylindrical arrangement of cells, showing it to be an original and not a subsequent formation. Some authors have stated that the cell-cylinders are surrounded by a membrana propria, which, if true, would be in favor of the opinion that they are developed from glands. "But this is an optical illusion, due either to hardening the cancer in alcohol, or to the use of acetic acid. By means of injections I also satisfied myself that there was no connection between the cancer-cylinders and blood-vessels."

These statements, which seem like bare assertions, are, it must be remembered, exemplified in the original volume by most beautiful representations of microscopical sections showing clearly the various conditions and appearances described by the author. He then proceeds to describe the methods employed by him in the examination of specimens. These are well worth knowing in case any one should feel inclined to pursue a similar course of investigation for himself into this most interesting and important subject. He first tried impregnating his specimens with silver, according to Recklinghausen's method. This, when successful, which it is not always, gives very well-marked results.

The sections to be silvered need not be taken from a fresh tumor. It is better to wait some hours before preparing them. Cuts should then be made from the periphery and horizontal. The silver solution should be one-fifth per cent., and the sections should be left in the solution for about half a minute. While in the solution they should be moved about with the needle to wash off any débris of cells or tissue fragments, or else gently brushed, either in the solution or instantly in distilled water. If left longer in the water the cuts become worthless, and it would be better to brush them after the reduction of the silver. This is, in fact, often needful. The cuts are then to be laid in glycerine, though if put up for preservation in this they do not last. The action of the silver is the same here as everywhere. "The connective-tissue fundamental substance and the cement substance of the epithelial cells become uniformly brown, while the juice-canals (Saftkanälchen) and cells remain uncolored. The cell-cords appear like bright bands in the brown stroma, showing only a fine net-work of brown lines, the colored intercellular cement substance of the cancer-cells. When the anastomoses are frequent, the cancer-cords resemble exactly similarly prepared lymph-vessels."

A comparison of fresh preparations with silvered ones from the same place, will prove the identity of the cancer-cords with the lymph-vessels. Where the silvering is imperfect, the cancer-cells may be seen through the fragments of the silver lines or as a continuation of them. Sometimes, in spite of the coloration of the intercellular substance, the cancer-cells remain visible together with their nuclei. The best method to show this identity is simply to remove a preparation from the silver solution and let it color itself under the microscope; this shows beautifully the identity of structure, arrangement, and relations, and "not unfrequently we see the smaller epithelial cells becoming larger, the silver lines growing clearer, more uniform, thinner, more deeply colored, and meandering, till at length before our very eyes lie the large, long, polygonal or rhombic cells with wavy margins, just as in normal lymph-vessels." This transition may be gradual or sudden. Not only in the proliferations of the cancer-cords, sometimes even in the middle of their course, we observe places where the cancerous degeneration has not yet occurred. This is, moreover, no example of one sort of cells covering and concealing another, but an actual substitution, the very thin scales of lymph-vessel epithelium losing in length and width what they gain in thickness as they swell by the absorption of fluid, and taking on all sorts of epithelial forms from mutual pressure.

"By the treatment with silver we arrive, then, at these results:—

"I. That the younger cancer-cords and their epithelium demean themselves towards silver just as do the lymph-vessels.

"II. That they correspond perfectly to the lymph-vessels in their distribution, arrangements, and combinations among themselves, and in their relations to the blood-vessels and to the papillæ of the skin.

"III. That they are not covered by normal lymph-vessel epithelium; but

"IV. That the epithelium of the cancer-cords becomes larger and more indented, and passes over into normal lymph-vessel epithelium.

"From these we deduce—

"I. That the cancer-cords are formed from the lymph-vessels.

"II. That the first cancer-cells are altered lymph-vessel epithelium."

Koester then describes his method of preparing *fresh specimens.* These are perhaps less satisfactory in the results they furnish than those prepared with silver, but useful nevertheless for purposes of comparison. The method of preparing specimens with silver is also a tedious and laborious one.

The tumors were preserved either in dilute alcohol or in Müller's fluid, the latter to be preferred, for, though it must be renewed every few days to guard against the development of fungi, yet the cell-elements, and especially the delicate epithelial cells, are better preserved by it. The fluids used in the examination of fresh specimens should be as indifferent as possible—salt-water, solution of albumen, serum, and aqueous humor; and even in these the young cancer-cells fade from sight after a short time. Few tumors keep well enough to allow an investigation of their entire development. The worst are those having a limited and localized field of attack upon the normal tissues; whereas cancers with mucous degeneration of the connective tissue usually keep very well. Acetic acid should not be used. Imbibition with carmine is of no use, except to beautify the picture. The preparations should be examined in glycerine, which clears up the connective tissue.

The boundary between cancerous lymph-vessels and connective tissue is well shown in fresh specimens, especially in those cancers whose cells are succulent or cylindrical. It is least well shown in those cancers whose cells are spindle-shaped, especially if at the same time there is much cell-proliferation in the connective tissue, in which case we might believe we had pure sarcoma before us. In general the difficulty increases the more the cancerous lymph-vessels approach their normal condition. If the tumor has been hardened in alcohol, the cancerous lymph-vessels will be found much shrunk, and the difference and sharply-defined boundary lines between the cancer-cylinders and the connective tissue will be less marked or absent. The cancer-cylinders themselves, however, are often more evident, especially if they have acquired a yellowish tint.

The chief advantage to be derived from the examination of *hardened specimens* is, that under this treatment "certain sections of the cancer-cylinders can be directly recognized as lymph-vessels with normal epithelium which has now become visible." This is especially well shown where there is a defect in the superior layer of cells, that is, the upper surface of the tube, enabling us to obtain through this aperture a view into its interior. Several times also in fresh specimens Koester saw cells, previously swimming free in the fluid used for investigation, arrive at a defective place in the wall of the cylinder, squeeze through, and swim on inside of the tube; the microscope, when shifted, showing an epithelial wall both above and below them. This is rare, however, for a fresh preparation is lax at best, and when spread out upon the slide the walls fall together, this being still further aided by the weight of the covering glass.

With regard to the *further cell-proliferation* of the cancerously degenerated lymph-vessels, Koester says:

The younger cancer-cells produce of themselves new cells, as is shown by the increase of the nucleus corpuscles and the constrictions and divisions of the nuclei. These new cells can, of course, in their turn, again divide. But it is also possible that connective-tissue cells may thrust themselves between the already formed cancer-cells, and, according to the hypothesis of Recklinghausen, produce by conjugation a more active cell-proliferation, for cells of a contractile character can effect such an entrance, and the primary stage of cancer is often accompanied by excessive cell-development in the surrounding connective tissue, as instanced by Waldeyer. Cells also may pass from the blood-vessels through the connective tissue and into the lymph-vessels, as is proved by the recent investigations of Cohnheim, Hernig, and others. When we consider that the dilated condition of the blood-vessels renders such a wandering of the cells most easy, that the obliteration of the lymph-vessels causes stagnation and heaping up of such cells, and that these cells disappear without pressure and without fatty degeneration, we may imagine, at least, that they have been taken in and appropriated as cancer-cells. This stagnation in the vessels explains also the mucous infiltration or rather degeneration of the connective tissue, most marked in the immediate neighborhood of the cancer-cords.

Not content with this exposition of the result of his researches in direct proof of the formation and development of cancer from the lymph-vessels, Koester concludes by devoting some fifteen pages to clearing up an error of very recent date, viz., that the skin and its glands are to be considered as the starting-points of epithelial carcinoma. He says:

It is true that the glands of the skin may assist in augmenting the volume of a cancer already in process of development, but any direct and original outgrowth from the true glands of the skin has never been proved. And even the apparent glands with which the cancer is conjoined, are often glands only in appearance, as has been already stated by Virchow, Förster, and others. To prove that these bodies are actually glands. we must be able to trace their excretory ducts to their orifices in the surface of the skin, which has not been done. One picture, which we sometimes get under the microscope, is particularly deceptive. This is when anastomosing cancer-cylinders, lying in a stroma of connective tissue thickly infiltrated with cells, are connected superiorly with the skin by short stems, resembling ducts, but in reality due to the blending by melting together (Verschmelzung) of the lymph-vessels and the skin. Or, again, an appearance as of cancerous glands is often afforded by sweat-glands atrophied and fattily degenerated. But, side by side with these, and plainly distinguishable from them, lie always the cancerous lymph-vessels, often showing their central cavity, and connected together by anastomoses, which were wanting in the case of the glands. In these cases the lymph-vessels around the glands were neither qualitatively nor quantitatively more changed than elsewhere, but more easily recognizable, since around the sweat-glands the connective tissue is less dense than usual. These glands often also lie unchanged side by side with the cancerous lymph-vessels, and may even be pushed aside by them. If specimens are examined fresh, there is less danger of mistaking these glandular convolutions for cancer-cylinders than in specimens hardened in alcohol, or treated with acetic acid or carmine. Nor have I yet seen a complete hypertrophy of the entire gland.

Changes in the hair-sacs and their glands generally go hand in hand. In apparent hypertrophy of these glands, in the comparative examination of two cancers, we must not forget the original seat of the cancer. Thus, hair-sacs and glands from the chin of a man would naturally be larger than from the cheek of a woman. Then, too, cancers develop themselves in many cases from warts, and it is well known how large hair-sacs and glands are in such spots. And where hairs are lacking, as, for example, on the nose, the sebaceous follicles may yet be of great size. Such apparent hypertrophies in a cancer can prove nothing, until it is also proved that the primary cancerous degeneration takes its origin in them. The most frequent change noticed in the hair-sacs was a deposit of cells, epithelial towards the cavity of the hair-sac, but losing this character as they progressed outwards, and finally without a definite boundary passing into the connective tissue. Where the cells were heaped up, strobiliform projections were sometimes formed, but even these were not connected with the cancer-cylinders, which surrounded and passed over the hair-sacs. If they ever became soldered together, this was due to the development of the cancer-cylinders which pressed upon the hair-sacs, and not to any primary formation of cancer-cells in the sacs. There is, then, no direct relation between cancer and a hypertrophy of the hair-sacs and glands, whether this hypertrophy precedes (as is generally the case) or follows the development of the cancer.

Koester next proceeds to show that *papillary hypertrophy*, whether preceding, accompanying, or resulting from, cancer, is not itself cancerous; for there is papillary hypertrophy in warts or condylomata before any cancer is present, and hypertrophy may also be almost expected as a coincident or subsequent result of cancer-formation. Is Koester's theory true—that cancers originate in the lymphatics—"Teichman has shown the widening and lengthening of the lymph-vessels of the papillæ and the consequent hypertrophy of the latter in elephantiasis. Virchow, also, long since gave it as his opinion that neither pre-existing nor secondary papillary hypertrophy was in itself cancerous."

He then mentions the condition of the *cornea* in cancers of the conjunctiva bulbi, where epithelial twigs often extend from the border of the cancer into the cornea, and these cancer-twigs, he thinks, "may be due to the new formation of lymph-vessels from the juice-canals (Saftkanälchen) pre-existing."

In *arteries* the change consists in a thickening of the walls, by no means an invariable rule, and generally confined to the middle coat.

In *muscles* he finds an exuberant development of nuclei (Muskelkerne), and in addition a separation or splitting into spindle-formed corpuscles (Muskelkörperchen) containing one or more nuclei.

The *forms* assumed by the cells in Epithelial Carcinoma are multifarious. Koester calls particular attention to one form, the box-cells (Schachtelzellen), which are large epithelial cells containing other cells (not nuclei) perfectly inclosed within them. These large epithelial cells may be inclosed in still larger ones, and, in some rare cases, these again in others.

The *metamorphoses* of cancer-cells are well known. There are, however, two sorts of hyaline degeneration, one forming tough, yellow, waxy bodies, melting together sometimes into long rods, sometimes into clubs or balls; the other, dull blue in color and occurring in small balls. The former develops itself either from around the nuclei or in the protoplasma of the cells; the latter proceeds chiefly from the nuclei, and is probably an earlier stage of the former.

The *etiology* of cancer Koester does not pretend to explain, but suggests that clots in the lymph-vessels generally precede the cancerous degeneration, and it is very possible that these may be the primary cause. At all events, this would explain admirably the metastases of cancer.

Koester concludes by expressing his disinclination to remodel the existing *classification* of cancers, since no perfect classification can be constructed before anatomical characteristics and clinical indications are definitely conjoined; before one can, in fact, diagnose the structure of a cancer from its macroscopical appearance, and from the former, again, deduce a trustworthy prognosis.

In this hasty review of Dr. Koester's work, it has been my object to draw the attention of dermatologists to a new theory of special interest, and to adduce some of its alleged proofs, rather than to express my opinion of the book itself materially considered. The progress of science is measured by the number and value of its actual discoveries; the manner in which these discoveries are made known is of less importance. Some slight obscurity in the mode of expression and a little lack of logical sequence here and there may well be pardoned, in consideration of the valuable original and laborious investigations.

Edward Wigglesworth, Jr., M. D.

THE HYPODERMIC USE OF CORROSIVE SUBLIMATE IN THE TREATMENT OF SYPHILIS.

1. Lewin[1] arranges his book in nine divisions, the first four of which are devoted to a consideration of the instruments and solutions used, the local and constitutional effects of the mineral, and rules for the places of selection for injections. The fifth, which constitutes a large portion of the work, is taken up with a consideration of the different symptoms of syphilis, among which, by the way, he admits the existence of a syphilitic lupus, their treatment by hypodermic injections, and is illustrated by cases.

The sixth section treats of the influence exercised upon the treatment by age, sex, menstruation, acute diseases, etc.; and the seventh, of the quantity of corrosive sublimate needed to exercise a cure.

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[1] *Behandlung der Syphilis mit subcutaner Sublimat-injectioso.* Dr. G. Lewin. Berlin. 1869.

In the eighth section, he goes very thoroughly into a review of the frequency of relapses occurring under the various forms of treatment, comparing them with one another as to their nature and the length of time after treatment that they take place. The ninth finishes the book, with details of the results of this course of treatment upon pregnant women affected with syphilis and upon their offspring.

The instruments necessary for the purpose are a graduated hypodermic syringe and a solution of corrosive sublimate. Of this latter three strengths are used, viz., 1st, 3 gr. to ℥ i. aq. dist.; 2d, 4 gr. to ℥ i. aq. dist.; and 3d, 6 gr. to ℥ i. aq. dist. This latter is seldom used, as from its strength it is liable to produce local inflammation and abscesses, and the first because it is too weak a solution. Of the sublimate, from $\frac{1}{10}$ to $\frac{1}{8}$ of a grain is injected at a time, and repeated if need be. For the mitigation of the pain, $\frac{1}{10}$ to $\frac{1}{8}$ gr. morphia is added to each injection. For their proper administration he lays down the following rules, as upon their non-observance depends the pain and discomfort of this method. The avoidance of injecting where glands, veins, or nerves are numerous, and upon the flexor aspects of the joints. The best places are upon the chest-walls, the back, and the upper and outer portions of the arm. The point should be carried well into the subcutaneous cellular tissue, and not into the lower stratum of the cutis, into adipose tissue, nor into the muscles, as deep abscesses, attended with gangrene of the tissues, are likely to result; the solution is not absorbed, and the treatment turns out a failure. By following these rules, out of one thousand cases treated by this method in private practice, he has had but one in which abscesses occurred. Sometimes induration, attended with pain and inflammation, appears at the injected points; this usually disappears under simple dressings of cold water.

Our author recommends beginning treatment as soon as the nature of the ulcer is determined, even before secondary symptoms have appeared. While the disease is yet recent, it is amenable to small quantities of the sublimate, requiring from $\frac{1}{2}$ as the minimum to 3 gr. as the maximum amount, as may be readily seen from the following table :—

The chancre and glandular induration	require	....gr. $\frac{1}{2}$ to 2
Condylomata	"	....gr. $1\frac{1}{2}$ to $2\frac{1}{2}$
Erythema of the fauces	"	....gr. $1\frac{1}{3}$ to $1\frac{2}{3}$
Roseola..........	"	....gr. $1\frac{1}{3}$ to $2\frac{1}{2}$
Squamous and papular syphilides........	"	....gr. 2 to 3
Mucous patches of the mouth, throat, etc.	"	....gr. 1 to $1\frac{2}{3}$

These figures are, of course, more or less approximative, as in some cases more, in others less of the sublimate is needed; but they represent about the average doses used to effect a cure in these forms of the disease. But the longer it has lasted the more rebellious does it become to treatment, and the larger the quantity required. Thus—

Ecthyma and rupia	require	gr. 3 to 5
Iritis	"	gr. 1½ to 6
Gummata	"	gr. 6 to 10

Orchitis seems to have been more rebellious to treatment than any of the cases we have hitherto been considering, as may be readily seen from what he himself says upon the subject, and the result of the case he reports. (Page 184.)

> "Those cases which I have seen were for the most part very obstinate from the beginning, or else were relapses, tedious in their course and hard to cure. I have been compelled to resort to quite large doses in the first set of cases, and in the second to renew the treatment. In spite of all this, in some instances, few it is true, I have not been able to obtain a perfect cure."

In the case he reports, after a treatment of two-and-a-half months, and the use of 5½ gr. of sublimate, the other testicle became similarly affected seven weeks after treatment had been suspended. This finally disappeared after the administration of 5 gr. more, and had remained well at the time of writing, six or eight months afterwards.

Affections of the bones.—Here the effects of the treatment vary much according as the symptoms are recent or otherwise. In the period of formation, while the neoplasm is still fresh and recent, and even after it has become organized, the proper use of the sublimate reduces the growth.

Where the tumor has become ossified he confesses the results have not been very favorable; it is sometimes reduced in size, but the hypertrophied bone-tissue and its periosteum remain unchanged. Its efficacy in reducing the osteoscopic pains is decided.

He gives three cases *in extenso ;* in the first, recovery took place after the use of 3 gr. of the sublimate, in the second, improvement after 1½ gr., and in the third, relapses occurred after 5 gr.

From these cases it will be seen that the hypodermic injection of corrosive sublimate is not attended with very much greater success than other methods, and the more advanced the disease, the less the benefit. With the injections he combines the internal use of iod. pot. or sarsaparilla.

Visceral Syphilis. *Syphilitic Icterus, Syphilitic Diseases of the Kidneys, Syphilitic Diseases of the Brain and Spinal Cord, Syphilitic Paralysis, Syphilitic Diseases of the Lung.*

In these, as in what has preceded, we find the same rule holding good, viz., where the symptoms are referable to the earlier stages of the disease, they are more amenable to the action of the sublimate. Syphilitic icterus recovers quicker than does renal disease due to the same cause, and this again than the cerebral forms of syphilis.

Of these various symptoms, moreover, those which are more recent do better than those which are more advanced. The most unfavorable cases were the diseases of the brain; in the three cases Lewin reports, improvement took place but no permanent cure. Sex, menstruation, the scrofulous or tubercular diathesis, chronic alcoholismus, and delirium tremens present no reasons for the suspension of this method of treatment.

In children he should abstain from its use more on account of the pain it occasions than from any other consideration, and acute inflammatory diseases (with the single exception of acute rheumatism) are contra-indications to its employment. Otherwise he deems it of universal application.

Of 134 women and 34 men treated in this way, the total average quantity used was, for the former, $2\frac{1}{2}$, for the latter 3 gr. This amount was diminished if other means had been tried before or in combination with the use of the injections, and in the following order:

1st. When iodide of potassium was given internally combined with injections;

2d. When morphia was injected with the sublimate and tannin used internally;

3d. When the sweating cure with sarsaparilla by the mouth (die sarsaparillen schwitz cur) had been tried before the injections, and potassium; and

4th. When mercury had been given by the mouth before this treatment had been begun.

This table will show how much sublimate had been used:

	Women.	Aver. of sublimate.	Men.	Aver. of sublimate.
1st	90	$1\frac{7}{9}$ gr.	12	$2\frac{1}{3}$ gr.
2d	62	$1\frac{9}{10}$ "	25	$1\frac{3}{5}$ "
3d	34	$1\frac{1}{2}$ "	—	—
4th	—	—	10	$1\frac{5}{8}$ "

Lewin claims that by this method relapses are from 35 to 45 per cent. less than by others, and that when they do occur the number showing an advanced stage of the disease is much smaller. For the relapses, only $\frac{1}{2}$ to $\frac{3}{4}$ of the quantity used for the first course is required to effect, what it nearly always does, a thorough cure. He goes on to state that in pregnant women the number of abortions was 19 per cent. less than where expectant treatment had been followed, and 3 per cent. than where inunction had been used.

As regards the effect this treatment had upon the children, he is not so clear nor so satisfactory. Out of 43 children, 32 were born alive, 11 dead. Of these 32 living children, 20 or $62\frac{1}{2}$ per cent. died. (Of what, or how soon after birth, is not stated.) Five only out of the 12 required treatment (inunction). Of these 12 the subsequent condition of but 5 could be ascertained, 2 of which died and the rest lived. Here again we are left in doubt as to the cause of death, but if from syphilis or its sequelæ the result is not very gratifying, for we see by the report that only 3 out of 43 children grew up—less than 7 per cent.

Liégeois' cases.[1] Two sets of cases are presented for observation, the first in 1867, the second in 1868. Those in 1867 comprise 18 patients presenting secondary symptoms, and were treated by daily injections of corrosive sublimate, 6 milligr. (one-tenth gr.) without morphia. In from 15 to 20 days their symptoms had disappeared, but the occurrence of salivation and abscesses induced him to think badly of this mode of treatment. In 1868 he was induced to try this method again with the following modifications: Instead of 6 milligr. he used only 4 milligr. (one-fifteenth gr.) of the sublimate in water, and to this solution was added 2 milligr. (one-thirtieth gr.) of morphia. This quantity was divided into two daily injections. The number of cases treated was 196, 193 of which presented secondary symptoms and 3 tertiary. In 4 cases slight salivation occurred. The number of recoveries on leaving the hospital was 127, of improvement 69. For those cured the average number of injections was 68, improved, 50. Among those cured, 12 (nine-forty-fifths per cent.) relapsed, and of the ones who had improved, 14 (twenty-thirtieths per cent.).

All these cases were not treated by injections alone, and some had even used mercury in other forms before coming into hospital. They are divided into 4 classes. Those who had been treated by mercury previously, got well the soonest; then came those who had been treated with tonics before admission into hospital; next came those in whom tonics and injections were combined, and last those who had received no previous treatment.

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[1] *Gazette Hebdomadaire*, July 9th, 1869.

The proportion of relapses in these 4 classes was as follows:—

1st class	6	per cent.
2d do.	37	" "
3d do.	12·50	" "
4th do.	7·70	" "

from which it appears that those cases in which mercury alone was used show a smaller proportion of relapses than where tonics alone or in combination with mercurials had been employed.

He sums up the advantages of this method of treatment under the following heads:—

1st. As being easy of application.
2d. As not being followed by local accidents (abscesses).
3d. Salivation rarely occurs.
4th. It is of great efficacy against secondary symptoms.
5th. It does not interfere with the functions of the body.
6th. Relapses are less liable to occur after this than after other methods of treatment, and when they do, they are much slighter.

Upon one point he lays great stress,—that the small dose is as efficacious as the large one, and less liable to produce local troubles.

Dr. Walker's[1] amount to 13 cases in all, 12 with secondary, 1 with tertiary syphilis, treated with one daily injection of $\frac{1}{10}$ gr. of corrosive sublimate suspended in glycerine and water. No morphia was added to the solution. The average duration of treatment was 58 days, and during its course salivation occurred in one and abscesses in two cases. He does not favor this mode of treatment any more than did his patients, all of whom complained bitterly against it on account of the pain and discomfort it gave them; in fact, one refused, point-blank, to continue it.

Here are his results:—

Well	8
Improved	2
No better	2
Refused to continue treatment	1

Stuekheil[2] speaks even less favorably of this injection treatment than Dr. Walker. By the use of $\frac{1}{8}$ gr. of sublimate merely diluted with water, he only obtained 1 good result out of 6 cases ($16\frac{2}{3}$ per cent.). In the other 5 cases ($83\frac{1}{3}$ per cent.) the treatment was a failure, and had to be abandoned for other methods. In all, the points of injection became red, painful, and swollen, leaving points of induration which lasted for some time, but no abscesses followed. No salivation was observed in any of the cases. He concludes his paper by assigning to this method the lowest position as a curative agent in syphilis.

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[1] *British Medical Journal*, December 4, 1869.

[2] *Zur hypodermatisches anwendung des Sublimats in der Syphilis.* Weiner Mediz. Wochenschrift, Nos. 7, 8. 1870.

Berkeley Hill[1] reports 11 cases in which this treatment was adopted, $\frac{1}{10}$ gr. of sublimate being injected twice daily. Of these 11, mercurialization (*sic*) occurred in 10, in 5 from the use of $\frac{8}{10}$ gr., in 4 from $1\frac{1}{5}$ gr., and in 1 from $1\frac{1}{3}$ gr. The eleventh resisted the effects of the injections, and was subsequently put upon internal treatment and mercurial baths. He also states, that after the use of $\frac{1}{4}$ gr. of the sublimate he has seen vomiting, griping, purging, and other symptoms of mercurial intoxication ensue. With such results he can hardly be blamed for pronouncing an unfavorable verdict upon this method.

In these selected cases we have taken evidence from both sides of the question, from those in favor of this method of treatment, represented by Lewin and Liégeois, and those against it. In criticizing the first-named of these writers, it must be borne in mind that it has been his hobby for some time, and one for which he would naturally say his best word. It may candidly be doubted if it is as painless and sure a way of treatment as he would have us to believe, and I have seen one gentleman who had been under his care in Berlin for syphilis, who reported it as exceedingly painful and disagreeable. That in some cases it may be beneficial, cannot be doubted, but that is not so much the question now as to determine what advantages it presents over the other methods in use for the treatment of syphilis. He claims it is more speedy in its action, that relapses are less liable to occur after its use, and that in pregnant women the number of abortions were 19 per cent. less than where the expectant treatment, and 3 per cent. less than where inunction had been used. What does Lewin mean by "expectant treatment?" If abstinence from the use of mercury is intended, how many surgeons of the present day would abstain from its use in the attempt to preserve the fœtus? Over the inunction treatment it has the advantage of 3 per cent. in its favor—not a very large one, and the disadvantage of pain, etc. If we may judge from the reports of Dr. Walker and Mr. Hill with regard to this question of pain, however, it must be allowed that it may be mitigated by the addition of morphia. Liégeois' two sets of cases show this to some extent; in the first, where no morphia had been used, salivation and abscesses were not infrequent, whereas in the second set, where morphia had been combined with the corrosive sublimate, the cases of salivation were few, and no abscesses occurred. But this diminution of the pain may be further accounted for by the small dose used, as well as by the employment of morphia. As far as the proportion of relapses go, the difference, by his showing, is much in favor of this method; he states them as from 35 to 45 per cent. less than by others. Should this be confirmed by further experiences, it will unquestionably go far to establish its superiority without the further recommendation that when relapses do occur, the number showing an advanced stage of the disease is much smaller. But where no such advantage is accorded it by other experimenters, this statement must be accepted with some reserve.

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[1] *Lancet*, May, 1866.

As to the question whether calomel or corrosive sublimate is better for this purpose, it may be answered in favor of the latter. Nearly all who have used calomel agree in condemning its use, for it is painful, and the formation of abscesses at the points of injection is the rule and not the exception. Ambrosoli's cases show this, and my friend, Dr. Bumstead's, are no exception. This gentleman further tells me that he does not think the duration of the symptoms was shorter by this than by other forms of treatment, and the pain and discomfort attending its use were such as to induce patients to leave the hospital rather than submit to it. My friend, Dr. Henry, Surgeon to the New York Dispensary, informs me that he has used the corrosive sublimate hypodermically, and in many cases with extremely satisfactory results, but scarcely sufficient to enable him to speak very decidedly on the special merits of this manner of exhibiting mercury.

With these disadvantages operating against it, it will not probably supersede other and older ways of treating syphilis, more especially in private practice; but to condemn it as worthless would be as unjust as it would be unwise. It could be injected in those cases where mercury cannot be borne internally, though even then mercurial baths, inunction, and suppositories would readily replace it, or in the army and navy, where its small bulk, the small quantity needed, the readiness with which it could be used, and its comparative cheapness, would be its chief recommendations.

Fred. R. Sturgis, M. D.

CONTRIBUTION TO THE HISTORY OF THE DEVELOPMENT OF THE ACHORION.

BY DR. ISIDOR NEUMANN, OF VIENNA.

TRANSLATED FROM THE "ARCHIV FÜR DERMATOLOGIE UND SYPHILIS," JAN., 1871, BY LUCIUS D. BULKLEY, M. D.

HAVING been occupied for nearly two years in experiments on the culture of the vegetable organisms found on the human skin, I venture to give the results of my studies in this branch, which has been variously treated by botanists and dermatologists of note.

As the value of experiments of this kind depends greatly upon the method employed, this point should claim our first attention:

That apparatus is the best which allows us to watch the continual progress of the cell-growth, while the so-called isolation apparatus, planned by Fr. Schulze in 1856, and afterwards employed by Schwann, Schroeder, Pasteur, Hoffman, and Hallier, is not adapted to the purpose. On the contrary, the cultivation apparatus as used by Hallier (Phenomena of Fermentation, Gährungserscheinungen, 1867) and by Hoffman, is practicable. Hoffman's apparatus consists of a glass slide, upon which rests a piece of card-board of the same size, previously disinfected and saturated with distilled water, and having a hole cut in the centre. A drop of the fluid, to be used for nourishing the fungus, is placed carefully on the centre of a glass cover, and the parasite sown in it. The cover is then inverted and placed on the card-board in such a manner that the drop is brought within the opening in the card-board.

The above described apparatus is easily managed, as is also that lately designed by Hilgendorf, and perfected by Hallier. This consists of a small glass cell, with a ground edge, and filled one third with distilled water. Upon this is placed the cover holding the drop of the nutritive fluid with the fungus on its under surface, which is then united to it with liquid glass, varnish, diamond cement, or fresh grease. Hallier connected this cell of Hilgendorf, somewhat modified, with an air-pump, and also a sulphuric acid wash-bottle, and a cotton filter, thereby providing the proper supply of pure air. (For details, see Hallier's & Zünn's *Zeitschrift für Parasitenkunde*, 1870, Bd. 2. 1 & ft. 1. s. 10.)

The method which I employed is as follows: A drop of the nutrient material is placed in the centre of a thin glass cover, and the fungus to be studied in close proximity to it, or, if the fluid is transparent enough, is sown directly upon it. This cover is then inverted and rested on two slips of glass, placed across an ordinary slide, which has been previously a little moistened. The cover and slide must be carefully washed, rubbed with writing-paper, and finally cleansed with spirits of wine.

The specimens thus prepared are laid in a flat, earthen vessel, glazed on the inside, a foot square by an inch high, ground on its upper edge, on the bottom of which are several sheets of blotting-paper, which should be kept saturated with a solution of corrosive sublimate. The whole is then covered with a sheet of glass, to prevent the access of foreign organisms.

Thus we have the preparation free on the under side of the cover, and know that nothing can fall upon it from above; thus, also, the free access of air is permitted, and repeated observations with the microscope can be very easily made during the day, if desired, without damaging the preparation, or impairing in any way its growth.

The seeds thus have sufficient air and moisture, and must be kept at a temperature of not below 68° Fahrenheit (16° Réaumer).

We made use of various substances as excipients in our experiments, and found the albumen of an egg best suited for this purpose, either alone or in combination with sugar of milk, with or without the addition of tartrate of ammonia; the latter was also employed alone with the sugar of milk. We also used with good success paste, starch, phosphates of ammonia, lime, potash and soda, sulphates of quinine and magnesia, each alone or variously combined; frequently, also, with the organic acids, especially citric.

Of course, all these substances were first freed from any fungoid elements which they might have possessed. To this end they were kept for a long time in a pulverized condition in absolute alcohol, the albumen excepted, which was placed alone in a culture apparatus for some time, and only employed when it was found to be free from parasitic elements.

We have used by preference, up to the present time, a starch paste mixed with the tartrate of ammonia, which is prepared as follows: The starch, which up to the moment of using has lain in the strongest alcohol, is shaken up with the alcohol, and about forty drops of the mixture are poured in a previously heated spoon, which is then filled with distilled water, and again warmed until paste is formed; to this is added the tartrate of ammonia, likewise preserved in alcohol, in the proportion of five per cent. of the quantity of the paste.

When this mixture is quite or entirely cold, one or two drops are placed on the under surface of a cover (as above described) and on its edge, and, in contact with it, the object to be studied.

In many cases the glycero-starch paste, likewise treated with tartrate of ammonia, is to be preferred. It is prepared in a similar manner, only there is 6 to 10 per cent. of glycerine afterward added, stirred in, and allowed to cool. This paste has the quality of remaining always moist, without the addition of water, so that the preparation is never in danger of suffering from uneven grades of moisture, as may readily happen with other nutrient materials which require moistening from time to time, and may be damaged by an excess.

This pabulum, freed from fungus, occupies as nearly as possible the centre of the glass, in order not to favor the entrance of extraneous organisms from the sides. The fungus is then sown either upon or near to the substance, and the specimen thus prepared is quickly inverted and placed upon the above-mentioned slips of glass. One will naturally always choose, for microscopical study, such objects alone as can with certainty be kept free from foreign forms of cryptogams.

The particles for cultivation should be taken from the under side and interior of scales shortly after they have been removed from the patient. The scales should be dissected with needles which have been previously heated, and the individual fungoid elements separated as far as possible, so that they may be observed and their development studied in an isolated condition.

It is only when they are not too thickly sown, when the above precautions are used, and a very exact drawing made immediately after the arrangement, and when certain portions of the preparations peculiarly adapted for observation are selected and defined, that we can, by assiduously continued observations, follow the changes in the individual cells, and at once recognize any possible defects which may manifest themselves. These come soon after the arrangement of the preparation, either from fungous elements which may enter at the sides of the specimen, or from superabundant growth, mostly of penicillium; such specimens must be rejected as useless. Especially is the formation of conidia within the first few days to be looked upon with distrust; and in case their development has not been accurately observed, these preparations must be repeated. When, on the contrary, we see the mycelial cells gradually enlarging for weeks or months, when we see them growing and sending out mycelial threads, and finally fructifying, there can be no doubt that the mycelium can, under favorable circumstances, again grow and produce conidia. To be sure, we are not accurately acquainted with the conditions which most favor their development.

Our specimens were arranged with the aid of the means specified, and furnished various forms of fungoid elements, according to the different substances in which they were planted.

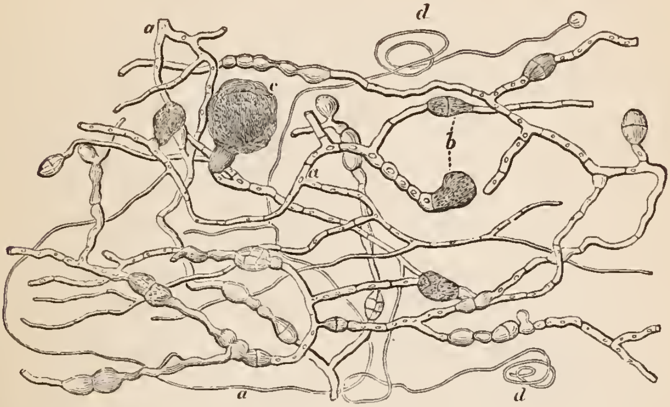
As I shall hope shortly to publish detailed explanations of the matter in these pages, I will at this time only demonstrate one remarkable manner of development of the achorion.

The study is in general a difficult one; for the growth always proceeds very slowly (3 to 4 months at least being necessary for a thorough observation), and impurities may therefore be readily mistaken for the results of culture, if the preparation is not watched very carefully. Moreover, the achorion cells are removed from the crusts, their natural pabulum, and from other conditions favorable to their growth.

In the cultivation with albumen and sugar of milk (those in albumen alone do not yield the same results), we find that the achorion cells send out threads in various directions, which acquire septa and divide dichotomously many times, so that the mycelia become continually more delicate and thinner, in proportion to their removal from the original mother-cell. They also either coil themselves spirally on their own axis, or they enlarge into balls of greater or less size. Others, on the contrary, grow perpendicularly, and often attain very considerable length, and ultimately break up into their component cells, like the oïdium lactis, without having produced even the appearance of conidia proper. Besides these mycelial structures, we find also offshoots, which depend on the grade of moisture to which the specimen has been exposed: there are likewise seen branches broken up into their individual cells on the ends of the perpendicular shoots, especially when the preparations have been kept too dry.

While the developments spoken of are taking place, peculiar changes often happen within the cells themselves. A new generation of cells is produced in their interior, while they themselves become elongated or roundish, and finally have the appearance of the so-called macroconidia, or the chlamydospores. Sometimes similar macroconidia are also formed at the extremities of the branches.

Fig. 1.



ACHORION SCHÖNLEINII AFTER FIVE MONTHS' CULTURE WITH ALBUMEN AND SUGAR OF MILK.

(*a*) Mycelium; (*b*) ovate-chambered cells; (*c*) spherical structures formed partly of the chambered cells, partly of those filled with granular contents; (*d*) spirally coiled hyphen.

The following specimen deserves to be especially described: In a preparation treated with albumen and sugar of milk, there were no changes to be detected on the 14th day; 6 days later single favus cells began to enlarge, and some of them to lengthen, although very slowly.

On the 22d day the development began to be accelerated; the stems branched regularly in all directions, and grew into rather short-jointed mycelia (Fig. 1, *a*), of which the branches running outward became continually smaller with their removal from the centre, while the smaller ones were not unfrequently variously coiled up (*d*).

On the 30th day single cells of the mycelium in the centre and the branches immediately around, which had there a decidedly vigorous appearance, began to swell, and assumed a more or less spherical form, resembling the chlamydospores (*b*); many of them lost again their albuminoid contents after a few days; some, however, increased in size, preserved their septa parallel to the longitudinal direction of the joints, and became honeycombed; sometimes from the larger mycelial threads in the centre there came side branches which directly developed into large ovate cells. Unfortunately, the specimen met with a mishap after five months' culture, without having reached a higher stage of development.

Later preparations allowed me to observe the progress of the growth of favus in the same manner, but I was never again able to trace the growth to the formation of such large spherical bodies, reminding one almost of the eurotium, as in the one described.

In two specimens albumen and sugar of milk had the effect upon favus-cells of producing numerous cellules in their interior, whereby they became globular and assumed a great size. It was evident, from various preparations, that the albumen of an egg especially, and, to a somewhat lesser extent, the tartrate of ammonia in connection with sugar of milk, produced an enlargement, increase, and alteration of the favus-cells.

After manifold experiments I have not as yet been able to determine whether inorganic substances (phosphates of lime and soda, sulphates, etc.) occasioned any striking alterations, or, indeed, any phenomena of fructification, or any anomalous or peculiar formation of conidia; nor with regard to the culture upon various fruits, apples, lemons, etc.

When we come to give the behavior of the favus cells with other nutrient materials, the occurrence of the true achorion will be fixed with certainty.

Now comes the question, Can we by cultivation of the achorion obtain again the mother-fungus, which probably exists? This is conceded by some mycologists, and denied quite as strongly by others.

(To be continued.)

ON SYPHILITIC PERIPYLEPHLEBITIS IN THE NEW-BORN.

BY PROFESSOR SCHÜPPEL, OF TÜBINGEN.

TRANSLATED FROM THE "ARCHIV DER HEILKUNDE," BY DR. FRANK P. FOSTER.

The liver is, notoriously, the organ which oftenest and most strikingly shows alteration in the new-born, when suffering from congenital syphilis. As a rule it is considerably enlarged, in some cases attaining double its natural weight. The increase in volume and weight is chiefly the result of a diffuse cell-infiltration of the whole organ—a condition which E. Wagner (*Arch. der Heilkunde*, 1864, p. 140), has named diffuse syphiloma of the liver. The function of the organ, at least the secretion of bile, is always greatly embarrassed by the adventitious deposit of cells, so that in such cases the gall-bladder contains only mucus, perfectly colorless and as clear as water, and the upper portion of the intestinal tube holds colorless contents. Sometimes this cell-infiltration so overwhelms particular portions of the liver, that the parenchyma is destroyed, being studded with white kernels (gummata), which attain the size of a cherry, the outlines of which are gradually lost in the neighboring reddish-brown hepatic tissue. Thus far I have seen this only twice in the liver of syphilitic new-born children.

More usually I have observed in such children an alteration, which I cannot find anywhere described, and which I will call *peripylephlebitis syphilitica.* Among some thirty cases of congenital syphilis which I have had the opportunity of examining during the period of two years and a half, I have met with this affection three times. These cases I will now briefly relate:—

Case I.—On the 25th of December, 1867, I made an autopsy of a girl born from four to six weeks before term at the Lying-in Asylum at Tübingen, whose mother, according to Prof. Breit, was suffering from manifestations of constitutional syphilis. The child was very ill-developed, and had a rather wide-spread exanthem, with spots of the size of a lentil, from which the epidermis was detached, and in which the reddened cutis appeared dried up. Jaundice set in on the second day after birth, and became constantly more pronounced, and the child died at the age of five days. The autopsy revealed the following: Icterus well marked. The dried remains of the umbilical cord still adherent. The navel itself, as well as the umbilical arteries and vein, appeared normal. In the brain, especially in the cortical substance of the cerebrum, were found separate opaque yellow spots, of irregular shape, which, as proved by microscopic examination, were formed by the aggregation of roundish cells affected with fatty metamorphosis and granular degeneration (the *interstitial encephalitis* of Virchow). The lungs appeared healthy, with the exception of a few atelectatic lobules. The heart was flabby, but healthy. The abdominal cavity contained a few tablespoonfuls of greenish serosity.

The liver, enlarged at least one third in every dimension, was of a dusky brownish-green color, stained with bile, soft and flabby. Hard kernels and cords were to be felt through the superficial hepatic tissue. Section showed that these kernels or cords followed the course of the larger branches of the portal vein. The trunk of the portal vein, at its entrance into the liver, showed a cord of fully a centimètre in thickness, which was easily distinguished from the dusky-green hepatic tissue by its firm consistence and its grayish-yellow color. On transverse section of the cord, the lumen of the portal vein was found so excessively encroached on by the concentric arrangement of the deposit, that it would scarcely admit a bristle. The centre of the cord, *i. e.*, the portion immediately surrounding the lumen of the portal vein, was grayish-yellow, dry, and opaque. Surrounding this portion was a pretty broad zone of pale, gray, succulent, and somewhat transparent substance, which shaded off gradually into the hepatic tissue. At a short distance from its entrance into the liver, the trunk of the portal vein was normal. At the entrance, while its wall quickly increased in thickness, its lumen became progressively narrowed. Within the liver the principal cord showed more and more branches at each additional section, and every one of these branches showed the same appearance. About midway between the porta and the margin of the liver these secondary cords ceased, ending abruptly in points, from which were continued the normal peripheral branches of the portal vein. That we must look upon this condition of things as an increase of the connective tissue accompanying the blood-vessels and bile-ducts, which we are accustomed to consider as a continuation of Glisson's capsule, appears from the fact that the course of the very contracted branches of the hepatic artery and the bile-ducts could be traced in the hard cords. The umbilical vein was strikingly pervious as far as its junction with the portal and its walls unaltered. The gall-bladder contained colorless mucus as clear as water.

The spleen was increased to double its natural size, full of blood, and tolerably firm. The pyramids of the kidneys were loaded with uric acid. The colon was distended with gas, and contained pale-yellow mucus. The mucous membrane showed venous injection. The meconium was entirely evacuated.

The microscopic examination of the liver showed the hepatic tissue affected with diffuse syphilomatous infiltration. The firm cords, which occupied the position of the portal vein and its principal branches, consisted of fibrous tissue. In the opaque grayish-yellow central portion of the cord was lodged a finely granular, partly fatty mass of solid lymphoid, for the most part atrophic, cells. In the pale-gray outer zone the fibrous tissue was wholly infiltrated with advanced, but not yet atrophic, cells.

Case II.—In this case the mother of the child was a primipara of twenty-one years of age. On the external genitals and around the anus were numerous elevated ulcers with indurated base, with swollen inguinal glands, and copious vaginal blennorrhœa. She could give no facts as to the duration of the affection. According to her reckoning, she was confined in the thirtieth week of pregnancy, and the child died at the end of eight hours. Weight of the body 1,600 grammes.

On section, the lungs appeared inflated through about one third of their volume; elsewhere they showed diffuse syphilomatous infiltration, and were non-aërated. In the abdominal cavity was a considerable quantity of yellow, slightly-turbid fluid, mixed with flocculi.

The liver weighed 134 grammes, and was therefore enormously large in comparison with the general weight of the body. It was of rather firm consistence, of a brownish-green color, very anæmic, and its tissue on section was perfectly homogeneous. The umbilical vein was pervious and perfectly normal throughout. The trunk of the portal vein also, and its branches in the whole of the right lobe, showed no morbid change. But the portal branch to the left lobe was embedded in a firm fibrous cord. It was of the thickness of the little finger, and its homogeneous, opaqne, intense yellow cut surface showed the lumina of the blood-vessels and bile-ducts markedly narrowed. The disease was confined to the larger branches of the left division of the portal, did not extend far from the porta, and was rather sharply defined from the hepatic tissue. The gall-bladder contained colorless mucus.

The spleen weighed 24 grammes, being therefore also considerably enlarged. It was firm, full of blood, but not diseased. In the upper part of the small intestine there was white, turbid mucus, in the lower part, meconium.

On microscopic examination, a diffuse infiltration of the whole liver with cells resembling lymph-corpuscles was observed, but only to a moderate degree. The cords in the left lobe of the liver consisted of a faintly-striated stroma, which was so thickly and uniformly infiltrated with little round cells, that it assumed a reticular character. No retrograde metamorphosis was to be observed in these cells.

Case III.—On the 26th of May, 1867, in the thirty-seventh week of pregnancy, a healthy woman, twenty-five years of age (who, at least, had two years previously borne a healthy child), gave birth to a girl, who weighed 2,500 grammes. She was suckled by the mother. On the 30th of May the child became jaundiced, and there was œdema of the genitals and the mons Veneris. On the 31st of May the œdema and jaundice had increased; the stools were perfectly white, and the urine intensely yellow. June 1. Persistence of these symptoms, with meteorism. June 2. A solid, dark-colored stool (bloody); jaundice still more marked; collapse. After several black stools, death ensued on the 3d of June, when the child was eight days and a half old.

Autopsy twelve hours after death: Skin of a pale icterous hue; no rigor mortis; pressure on the abdomen caused the escape of a material like coffee-grounds from the mouth and nose; remains of the umbilical cord still firmly adherent; brain and meninges excessively anæmic, and of an icterous hue; the lungs throughout contained air, and were very pale, and soaked with icterous serum; heart-substance flabby and of a pale-yellow color; the abdominal cavity contained a tablespoonful of clear, viscid, yellow fluid; intestines greatly distended with gas, and at the same time hyperæmic, allowing their dark-colored contents to show through. The hyperæmia chiefly affected the mucous membrane, upon which were numerous fresh ecchymoses.

The liver was somewhat enlarged, soft, flabby, and of a dusky-green color. Firm, deep-seated kernels could be felt from the surface. Closer examination showed that this feel was occasioned by strong cords, which corresponded to the course of the larger branches of the portal vein. The portal vein, on being cut across at its entrance into the liver, showed a solid fibrous cord of the thickness of the little finger, and a lumen scarcely a millimètre in diameter. The hepatic duct and artery also lay within the fibrous cord, and were so contracted that a bristle could scarcely be made to enter them. Towards the roots of the portal vein the trunk of the vessel rapidly enlarged, with corresponding thinning of its walls. On examining the cross-section of the above-mentioned cord, which extended into both lobes of the liver, following the course of the portal vein in an arborescent arrangement, the branches constantly becoming thinner—on examining this cross-section, the central portion of the cord was found of a bright grayish-yellow color, opaque, and of a firm, cheesy appearance. None of these cheesy spots showed any sign of softening. The cheesy centre was surrounded by a white, shining, somewhat transparent zone, from one to two millimètres in breadth, which then became lost in the hepatic tissue under the form of a diffuse infiltration. The gall-bladder contained mucus as clear as water.

The umbilical vein was normal as far as its junction with the portal. On the other hand, the ductus venosus Arantii was so contracted as scarcely to admit a bristle. Its walls were very much thickened, and fibrous. The umbilical vein contained fluid blood almost as far as the navel, and, close by the latter, a short, somewhat decolorized and slightly adherent clot. Umbilical arteries normal.

The spleen was enlarged to triple size, very hyperæmic, and its tissue stiff and fragile; kidneys pale and flabby.

On microscopic examination of the firm cords, which took the place of the portal vein and its larger branches, the cheesy centre appeared to be made up of an indistinctly striated ground-substance, in part markedly fibrous, and in part homogeneous, in which were strewn masses of shrunken cells, together with a finely granular and partly fatty detritus. The detritus was so uniformly distributed through the ground-substance, that in places nothing but a cloudy granular mass could be seen. The more transparent peripheral portions of the cords consisted of ordinary fibrillar connective tissue, which in some portions contained only a few connective-tissue corpuscles, but for the most part highly lustrous cells, of the size and shape of lymph-corpuscles, arranged in rows, or lying together in heaps. In many places, especially near the hepatic tissue, where there was no cheesy appearance, there was an abundance of brownish-red pigment in the form of groups of granules, and small crystals of hæmatoidine. In the hepatic tissue, clouded with albuminous material, and overladen with the coloring matter of the bile, a deposit of adventitious cells could not be certainly distinguished.

These autopsies alone would suffice to show, that in all these cases there was a peripylephlebitis—*i. e.*, an inflammatory process, which had led to an enormous proliferation and cell-infiltration of the connective tissue accompanying the portal vein. But, as to the question of the affection having been due to syphilis, we must take into account only the first two cases, since these children were born of syphilitic mothers, and, in addition to the hepatic lesion, bore on their persons other indubitable signs of congenital syphilis (the characteristic exanthem in the first, and diffuse syphiloma of the lungs and liver in the second case).

The knots and cords which were found in these children's livers perfectly conformed, as well in their gross characters as in their microscopic structure, to the tuberose syphilomata, gummata, in the livers of syphilitic adults; moreover, in the latter, gummata of the liver usually surround the larger branches of the portal vein, and even follow them in the form of cords, and on transverse section of the gummata the constricted or obliterated branches of the portal vein may be distinctly recognized. A preparation in the collection at the Pathological Institute of this place shows this condition of things in the most evident manner.

The progressively increasing cheesiness of the knots and cords, as we proceed from the centre towards the periphery, is another important analogy of our neoplasm with the ordinary syphilitic gumma. Furthermore, in our cases there were present none of the causes on which, according to experience, inflammation of the portal vein depends. Ordinary pylephlebitis, the adhesive as well as the suppurative, depends upon a coagulation of the blood in the portal vein. In our cases there was nothing of this sort; the portal vein and its branches were indeed hard pressed by the surrounding luxuriant tissue, but they were still pervious, and nowhere contained a blood-clot. Especially in the new-born, pylephlebitis, as a rule, starts from the umbilical vein, but in all our cases this vein was perfectly normal as far as the portal, nor was it affected in its course by an arrested clot. Finally, the existence of an inflammation of the portal vein in new-born children, *manifestly not arising from the navel and the umbilical vein*, seems to me to denote most decidedly that in our cases the peripylephlebitis was of a specific, syphilitic nature.

In announcing my third case as one of syphilitic peripylephlebitis, I rely upon its perfect anatomical correspondence with the two others, especially the absence of any affection of the umbilical vein, or, in general terms, any local cause for the pylephlebitis. The objection, that the child in question had not shown signs of syphilis, and was born of a healthy mother, is of no importance; since it has been established, that syphilis may descend from the father to the child, without infecting the mother. Nay, since it seems that such cases are pretty frequently met with, the like possibility is admissible in the case in question.

The facts here mentioned seem to throw some light on the origin of the so-called *arched liver*. As is well known, Rokitansky attributes the origin of arched liver to the contraction of the fibrous masses formed along the portal vein in the course of previous pylephlebitis. On the other hand, E. Wagner traces it to the contracting cicatrices which take the place of degenerated gummata. Now, while I hold the latter opinion to be correct, yet, from what is above stated, as well as from additional observations on gummata in the livers of adults, I would so modify it as to say, that the syphilitic neoplasm, as soon as it takes the form of large kernels, follows by preference the course of the larger branches of the portal vein, and completely surrounds them.

In so far as concerns the course and the symptoms of syphilitic inflammation of the portal vein, I scarcely need remark that the material in question is utterly inadequate to a statement of their relation. Only in the third case did the symptoms point towards disease of the portal vein, and in this case alone did the post-mortem appearances explain the symptoms which had shown themselves during the child's short illness. The perfect closure of the hepatic duct gave rise to such an excessive jaundice and to such a pronounced paleness of the fœces, as could otherwise have been owing only to compression of the gall-duct by tumor, or to impacted gall-stones. The lack of bile in the intestinal canal had induced an abnormal decomposition of the ingesta, and meteorism from the inordinate production of gas. The complete closure of the portal vein had caused a stasis of blood in its roots, which had declared itself by enlargement of the spleen, by hæmorrhage into the abdominal cavity, and by bloody stools. In this case the illness began on the fifth day after birth, and lasted three days and a half. Considering the marked and wide-spread structural changes in the liver, the tremendous increase of the connective tissue surrounding the portal vein, and the thorough retrogressive metamorphosis of the products of inflammation, we can only wonder that the symptoms dependent thereon, namely, the jaundice and the stasis of blood in the roots of the portal vein, showed themselves so tardily and so abruptly.

In our first case the child was attacked with jaundice on the second day. The jaundice kept increasing, and death took place on the fifth day. So, here also the duration of the illness was three days. The intestines were tympanitic, and their mucous membrane hyperæmic. There was no intestinal hæmorrhage, but, on the other hand, the abdominal cavity contained serous transudation, to the amount of several tablespoonfuls. Here also the severity of the structural lesions of the liver, and the retrogressive metamorphosis of the products of inflammation, were out of all proportion to the tardy and abrupt onset of the symptoms.

Finally, in our second case, in which only the left branch of the portal vein was diseased, and in which, moreover, the child died eight hours after birth, there were no symptoms pointing to disease of the portal vein.

ON THE GENERAL CONDITION OF SYPHILITIC WOMEN IN THE SECONDARY PERIOD.*

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TRANSLATED FROM THE GAZETTE DES HÔPITAUX, BY DR. R. W. TAYLOR.

Before describing any particular symptom, let us glance at the whole group observed in the secondary period of syphilis.

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* A Clinical Lecture delivered at the Lourcine Hospital.

What is the aspect of the syphilitic woman in this period? what is her bearing and physiognomy?—in a word, what is the general condition of her health?

In this general condition the syphilitic woman presents great varieties, but they are varieties more than absolute differences. Some women, in fact, bear their syphilis marvelously, and being syphilitic, do not present evidences of it. Others, on the contrary, are affected in different degrees by syphilis; they are really ill, and have a general syphilitic condition, just as a patient poisoned by lead has, besides the special manifestations of saturnism (colic and paralysis), a general saturnine condition. But let us enter into details, for there is no question which presents more interest to investigation than this, as from it can be drawn indications in prognosis and therapeutics which are very necessary to be determined.

In the first place, it is certain that many women bear syphilis with a marvelous resistance, or, stated in a clearer manner, there are a great number who, though syphilitic, enjoy good health, or, at least, are as well as they were before they became syphilitic. In them the diathesis does not seem to impair the great functions. They eat heartily and digest easily. Their complexion is florid, their plumpness gratifying, and their whole aspect betokens health. They are gay and active, and work without fatigue, and sometimes even grow fat and appear wholly uninfluenced by the disease. There are some of them even who, in spite of severe cutaneous and mucous lesions, have a superb countenance, a ruddy color, and an appearance indicative of perfect health. Let us understand this perfectly, and let us not participate in the errors of the laity who think that syphilitic women are blanched, have pallid complexions and consumptive facies. Let us understand that syphilitic women sometimes have a fine color, a bright eye, a ruddy complexion, and a blooming appearance.

But very frequently the appearance of the syphilitic woman is altered in varying manners and degrees. In the majority of women, syphilis produces a true state of disease; it depresses the great functions, probably by its influence upon the nervous system, alters the constitution of the blood, changes the deportment of the individual, modifies the constitution, diminishes the vital resistance, and, in short, exerts a manifestly depressing influence upon the whole economy.

This general action of the virus shows itself most generally in a notable diminution of the strength, an appetite less keen, an unusual languor, a marked prostration of all the functions, a peculiar alteration of color, an anæmic pallor, a very perceptible emaciation, an astonishing alteration of the physiognomy, often even in a modification of their habits, and their character, sprightliness, gayety, and natural aptitudes. In short, under one form or another the syphilitic woman appears really ill; her health is disturbed. But in what manner has it been disturbed? It has been said that under these conditions merely a chloro-anæmia is induced; but this is only partly true, for if in analyzing the phenomena we study nature, and inquire what functions are disturbed; if we search, in short, for the pathogeny and chain of these morbid symptoms, we will not be long in remarking that syphilitic women are not always affected alike by the disease; but that in one, for instance, such a system or function appears particularly involved, whereas, in another, this system or function is intact, and in its place there are troubles which did not exist in the first. There are, then, great varieties in the manner in which syphilis acts upon different subjects, and chloro-anæmia does not account for all of their symptoms.

Yet, however varied this influence may be, by a methodical analysis we succeed in separating two principal types under which syphilis manifests itself. According to my observation, a woman in the secondary period of syphilis usually presents one or other of the following conditions, either that of *chloro-anæmia* or that of *asthenia*. The first form, or chloro-anæmia, is admitted by all observers. Many women in the secondary period of syphilis are chloro-anæmic, and present the following symptoms: an alteration of the color of the integument and mucous membranes, a face dull, pale, and leaden, with a little yellowness, a general weakness and languor, incapacity to fulfill her usual duties without fatigue, slight emaciation, palpitations, especially upon walking or exercising, as in ascending stairs. Besides these symptoms, all the usual signs of anæmia, as observed by the stethoscope, are more or less pronounced; there is a soft cardiac murmur with both sounds, an intermittent or continuous vascular murmur, with reduplication, emitting sometimes such musical sounds as the buzzing of flies or a modulated whistle; in fact, all the essential and primordial phenomena, to which are added, as in the state of chloro-anæmia, either such disturbances of digestion as diminished or capricious appetite, gastralgia, and dyspepsia, or perhaps multiple and varied disturbances of the nervous system, such as different neuralgias, visceral neuralgias, excessive nervous susceptibility, dizziness, vertigo, and *muscæ volitantes.* This is the condition everywhere described as the *chloro-anæmia* of the syphilitic diathesis. This type is very common here and elsewhere, but it is not the unique and exclusive type of syphilis in women. There is another, occurring perhaps as frequently, which, although as yet it is not named or described, is not the less real, and clinically true; I denominate it *syphilitic asthenia* or *languor*. It differs from the first in the fact that, though it often presents similar and even more marked symptoms, it does not seem to be produced by that peculiar alteration of the blood which is the cause of anæmia. Concisely stated, that which is observed in this second form of syphilis is a species of languor, a profound depression of the economy, without the facies and the signs of blood-alteration peculiar to anæmia. In fact, these patients in no manner show the usual appearances of anæmic syphilitic women. Their complexion is only slightly altered; some even retain a very pleasing appearance, and they sometimes say that "they pay dearly for their looks."

Auscultation reveals no vascular or cardiac murmurs. There is nothing either in their physiognomy or physical signs which warrants the observer in classing them as chloro-anæmics. However, they complain of a general weakness, a peculiar lowness of spirits, of which they themselves cannot explain the cause, and sometimes even of an actual prostration. They are obliged to give up their daily duties, as they cannot perform them. They say they are always fatigued, even when they have done nothing. In the Hospital we see them keep their bed during the greater part of the day; and if they are reproached with laziness, they reply that it is not their fault—that they feel as if their legs were broken and their extremities benumbed. If they get up they walk with difficulty, slowly and heavily, after the manner of convalescents; when standing, they experience immediately a need to sit down; and if they attempt any exercise, they feel as if they would faint immediately. Finally, if we measure their vital force by the dynanometer, we find a considerable diminution of muscular power, as the instrument fails to indicate more than 25, 20, 18, 14, 10, and even 6 kilogrammes, whereas in a young woman of medium strength and build it usually indicates 30 and 35, and sometimes more. There is an extraordinary weakness observed in these patients—an asthenia, such as is scarcely greater in cases of profuse hæmorrhage or in the convalescence after adynamic fevers. Then, there are, besides this, morbid manifestations upon the principal apparatuses, in fact a special asthenia of each particular function. The heart-beats are feeble and dull, the pulse is weak and compressible, the respiration is labored, and accompanied with sighing, uneasiness, and transient suffocations. The digestive functions are deranged, there is a want of appetite, a slow and difficult digestion, often even with nausea and vomiting, as if the stomach had not the power to digest, and there is constipation, which is probably produced by intestinal atony.

The same depression is observed in the nervous system; sensation is dull, even obtuse; there is fatigue of the eyes, and transient mistiness; in some cases there is dullness of hearing, intelligence is even rendered less acute, reading becomes irksome, there is an inaptitude for mental labor if slightly prolonged; in short, a torpor of the brain and a cerebral asthenia. There are evidences also that this depression affects the great sympathetic system; there is great sweating, as in the adynamic condition, and local sweating; there is chilliness and coldness of the extremities, which indicate a lessened resistance to the fall of the temperature or to a lowered activity of the vital processes. In a word, we observe at the same time a general languor and special depression of all the functions, with evidences of greatly depressed vitality. This condition being clinically true, it is well to bear it in mind, and, if I may be allowed to apply to it a trivial term, I would say that it is the condition of a woman prostrate and used up by syphilis. This condition, then, should not be confounded with syphilitic anæmia, but is worthy of description under the head of *syphilitic asthenia.*

Now these two conditions of *asthenia* and *chloro-anæmia* do not clinically exclude one another, but they are often associated, and they then constitute what is denominated *syphilitic chloro-asthenia*—a mixed condition, combining the symptoms of each morbid type. There are various degrees of these types; very often the symptoms are mildly developed, and then the women are only slightly anæmic or asthenic; in others the symptoms are more severe, and then produce a true morbid state. Sometimes, but rarely, they attain a high degree of intensity, and undermine the health in an alarming manner; these cases are apt to deceive the observer by assuming the features of an impending phthisis. I show you here a young syphilitic woman, in whom very suddenly symptoms of debility have manifested themselves; she has become pale and dejected, has lost her appetite and strength, and has emaciated in a rapid manner; very often she has evening sweats and nocturnal fever (frequent symptoms of secondary syphilis). What disease is to be suspected and dreaded under these circumstances? Very evidently pulmonary phthisis. In fact, this is the diagnosis, or rather the apprehension, to which any physician might be led. Many times, under these circumstances, we have believed our patients upon the verge of tuberculosis, and have auscultated them anxiously, seeking in their chests an explanation of their symptoms; then in a little time, very happily, our suspicions are found to be erroneous, as syphilis proves to be the cause of the symptoms, and not phthisis.

Syphilitic chloro-anæmia and asthenia are merely temporary conditions, and their symptoms are not observed in the syphilitic woman during the whole secondary period; but they may last perhaps for months, or for a year at the most, and then they disappear, especially if a proper treatment is instituted in time. But although temporary, they are none the less grave; and this is an important point, and worthy of the attention of the physician. On the one hand the condition may become serious of itself by increasing and ending in that formidable condition known as syphilitic cachexia. But this is not its least danger, for cachexia is rare even in women, and there are only a few cases in literature; and for my part, since I have been attached to the Lourcine Hospital, I have only observed a single case. On the other hand, the indirect consequences of this debility are especially serious. The functional disturbances caused by it, and the depression of the whole organism, diminish the resistance of the individual to morbific influences which may overtake him or her, and in that manner excite or favor the development of certain diatheses. For instance, let us suppose that a serious intercurrent disease attacks a patient in this debilitated condition: is it probable that a constitution thus depressed would be prepared to endure the shock? That mysterious element, which is called the malignity of diseases, is certainly due to certain acquired tendencies of the organism. There can be no doubt but that syphilis may in some cases be the cause of this malignity, by reason of its depressing action upon the economy, or that in syphilitic patients certain simple diseases become at times serious. I have already thought that in some cases I could distinguish, in a clear manner, this influence of the syphilitic diathesis upon the evolution of intercurrent diseases. This fact is not susceptible of exact demonstration, it is merely an impression; but I believe that I am not incorrect in its assumption.

I have said, in the second place, that this debility produced by syphilis can favor or excite the development or manifestation of certain lurking diatheses; and there can be no doubt about this fact, as all physicians whose observations are not confined to the limited field of specialism, have been struck with this indirect action of syphilis. As regards scrofula, we have daily examples of it in the persons of young lymphatic and delicate people, and of fair complexion, particularly women: in this temperament we see syphilis excite a latent strumous vice, and produce morbid conditions positively strumous, such as, for instance, large chronic, ganglionic engorgements (cervical, submaxillary, inguinal, &c.), or perhaps inveterate and malignant *scrofulides*, which are at first mistaken for syphilides, did not their rebelliousness to treatment and other features point out a scrofulous origin. It is to these lesions of mixed origin and features that M. Ricord has very expressive y applied the term *scrofulates* of *syphilis*.

The same holds true of tuberculosis. For instance, a young woman, predisposed to acquired or hereditary tuberculosis, contracts syphilis, which produces anæmia and asthenia; the latter may hasten the development of tubercles, which, under other circumstances, might not have been produced, or might have been delayed. This is a clinical fact which appeals to common sense. I have seen in this Hospital, and elsewhere, numbers of young persons upon whom syphilis had exercised this extreme depressing influence, who have become tuberculous in the first months or in the first year of their syphilis. I may even add that, under these conditions, phthisis sometimes runs a hasty course, and quickly kills the patient.

Thus, from personal experience, and from that of other observers, I do not hesitate to pronounce syphilis to be one of the causes of pulmonary tuberculosis. In what manner this special cause produces tuberculosis I am unable to say, but I suppose that it acts by undermining the organism and in diminishing the vital resistance, acting not as a specific but as a depressing cause.

Be watchful, then, of a case of syphilis when you see that it debilitates the constitution of the patient, especially if the latter is a young subject, particularly a woman of feeble habit and of anæmic tendency. Be still more careful if this young woman is predisposed hereditarily to tuberculosis, for in such a case syphilis may become the exciting cause of the development of tubercles. These remarks as to the development of tuberculosis and scrofula by syphilis, apply to other diatheses, particularly to the neuroses, which are sometimes surprisingly aggravated by syphilis.

I will close with the following aphorism, based upon one of the most extensive medical experiences—an aphorism of which I daily more and more appreciate the clinical truth: "Syphilis," says M. Ricord, "is a signal (*branle-bas*) in the economy—a signal capable of exciting all of the organic vices, of awakening all the dormant diatheses, and which consequently becomes the starting-point of phenomena and symptoms which are in health absolutely foreign to it."

This point of view of the systemic condition produced by syphilis is particularly interesting to the physician. When we make a prognosis of this disease, we usually take into consideration existing symptoms; but this is a mistake; for, besides these symptoms, there are other dangers to which the disease leads, and these indirect dangers are oftentimes more serious than those which are the direct and specific result of the diathesis. The usual manifestations of syphilis are very often so trifling that we pay no attention to them. We have remedies which cure them, if not invariably yet in most cases; whilst against the indirect consequences, such as scrofula and tuberculosis, we are either almost powerless or completely disarmed. The conclusion, then, is, that syphilis is not serious as a disease, but as a cause of disease; and the practical deduction of this is, that it should be treated not only for itself, but also in anticipation of the indirect dangers to which it leads.

GUMMY TUMOR UNDER THE CONJUNCTIVA BULBI.

BY DR. J. A. ESTLANDER, OF HELSINGFORS.

TRANSLATED FROM THE "KLINISCHE MONATSBLÄTTER FÜR AUGENHEILKUNDE," 1870, BY DR. CHARLES E. HACKLEY.

COMMON as these syphilitic neoplasms are in other parts of the body, they are rare in the eye, although the conditions necessary for their occurrence seem to exist there also. But few such cases are found reported, hence the following history may not be without interest.

Hilma Lagerblom, 19 years old, a servant from Tavastehus, came to my clinic July 5th, 1870. She stated that, when she was ten years old, numerous persons in the house where she lived were affected with syphilis, among them her parents. At this time she also had a sore throat and mouth. About two years ago an ulcer formed on the anterior surface of the right leg, below the knee; it healed under external remedies. More ulcers subsequently formed in the same part. About the first of May, 1870, an ulcer formed on the left arm, below the olecranon, then a second came just above the internal condyle of the humerus, and finally a third one near the first. These ulcers and the severe pain through the whole arm induced the patient to come to the clinic.

At that time her condition was as follows: Appearance pale and anæmic, but well-nourished; nothing abnormal in the internal organs; about the left elbow-joint was an ulcer, whose irregular form and general appearance indicated that it was due to ulceration of syphilitic tubercles of the skin; below the right knee was a similar ulcer in process of healing, and several scars from similar ulcerations. Nothing abnormal was seen in the eyes. Under treatment with iodide of potassium (first, gr. v., later, gr. x., three times daily), these ulcers began to heal.

On the twelfth of August the patient complained of pain in the left eye. On the outer border of the cornea, in front of the tendon of the external rectus, in the subconjunctival cellular tissue, there was a smooth, flat tumor, which measured horizontally 6 mm., vertically 3 mm., and about 2 mm. high. Over the middle of the tumor the conjunctiva was grayish white, as if commencing to ulcerate, but on the margin the epithelium was still present, and at this part the tumor was translucent. The conjunctiva just around it was red from injection, and from the conjunctival fold a couple of distended blood-vessels advanced toward the tumor. The adjacent portion of cornea was grayish and opaque. As the tumor was divided with a cataract-knife, a slight quantity of purulent fluid oozed up, and a yellowish tissue, extending to the sclera, appeared in the incision. With the object of watching this tumor further, the eye was treated expectantly, while the iodide of potassium was continued internally. During the next five days, however, the inflammatory symptoms increased, so that inunction treatment was resorted to. Until the third of September a half drachm of unguentum hydrargyri was rubbed in daily, but then it had to be discontinued, as the mouth was affected. From the commencement of this treatment the inflammatory symptoms began to subside, as did the tumor itself, and a week after the termination of the treatment only a deep-grayish cicatrix was left. Of the opacity of the cornea, only a fine line on the outer border remained.

During the inunction treatment the ulcers above mentioned healed rapidly, and when the patient resumed the use of the iodide the ulcer on the arm healed entirely, but that on the leg remained obstinate; so on the seventh of October I ordered Zittmann's decoction, but as iritis began in the right eye on the eleventh and increased in spite of the decoction, I had to return to the inunction treatment. This inflammation (which was not accompanied by circumscribed vegetations or condylomata) and the ulcer on the leg were cured by the treatment, and the patient was dismissed November 25th.

In the *Archiv für Ophth.* (Bd. viii. Abth. 1), Alfr. Graefe and Colberg described a nodule, which, in a case of syphilitic iritis, was removed from the iris by an operation, and on microscopical examination proved to be a gummy neoplasm (Bd. xiii. Abth 1); v. Hipple also described a case of gummy tumor affecting all the coats of the eye. As the internal parts of the eye were affected in both of these cases, of course they cannot clinically be compared with the case above described; but it is worthy of mention that, in the case described by v. Hipple, the second eye also was attacked by iritis, and that the point where the pathological changes were most advanced was the anterior inner part of the sclera. This may give a certain resemblance to my case.

The third case of this kind that I have been able to find is one mentioned by Wecker, in his treatise on "les maladies des yeux," under the head of Syphilitic Affection of the Conjunctiva: this corresponds with mine in almost all respects. The position, size, appearance, and other clinical symptoms, were the same; the cicatrix remaining was the only difference. But possibly the pterigium-like thickening of the conjunctiva that Wecker saw may have changed subsequently to a grayish, deep cicatrix, as usually occurs in the skin, and as seems to me natural.

The inflamed gummy tumor at the outer border of the sclera resembled a large pustule, but the two diseases could scarcely be mistaken for one another; a mistake for a malignant tumor would be more probable. Wecker says that Sichel, to whom he showed his case, had never seen a tumor of this nature, and at the first glance regarded it as epithelioma. Indeed, the location of this neoplasm is the favorite seat of malignant tumors. The size, too, was about the same; but the appearance is different. Gummy tumors, covered by the conjunctiva, have a smooth surface, are less distinctly bounded, and, even when they begin to ulcerate, appear translucent at the borders; malignant tumors, on the other hand, are usually sharply bounded and nodular; occasionally they are even lobulated. At all events, the diagnosis may be confirmed by the simultaneous occurrence of other syphilitic symptoms, which should always be present elsewhere if the eye is affected.

In regard to treatment, I will merely add that iodide of potassium appears inefficacious; for, in the above case, the tumor occurred while the patient was using this remedy in large doses. Just as in syphilitic iritis, the inunction treatment, or the energetic administration of mercurials in some other way, appears most beneficial.

Epitome of Current Literature.

Case of Visceral Syphilis.—Dr. Laure reports the following case of *visceral syphilis.* A laborer, fifty-one years of age, who had never suffered from intermittent fever, was ill for fourteen days, eight years previous, with an affection of the liver, which was characterized by pain, icterus, and ascites; and although he completely recovered, was wont to have pain in the right hypochondrium after severe labor or excess in drinking, to which he was addicted. Whether he had had syphilis could not be discovered. For the last month the following symptoms have been present: pain upon pressure in the region of the liver, disordered digestion, loss of appetite, vomiting of food and mucus, constipation, sallow countenance, contracted liver, ascites, and emaciation. An appropriate treatment caused some improvement, and the ascites disappeared. Later osteo-cephalic pains came on, which revealed the nature of the disease, and on further examination five or six bony prominences, the size of a nut, were found upon the head. Under a mixed anti-syphilitic treatment these disappeared in five weeks, leaving in their stead appreciable depressions. With the exception of repeated attacks of epistaxis and a slight bronchitis, the patient complained of nothing in particular, and felt on the whole a great deal better; when poor assimilation and nourishment again came on with a renewal of the vomiting, and, eight days before death, considerable ascites.—Autopsy: Depressions upon the upper portion of the frontal bone, and on both sides of the sagittal suture. At the periphery of these depressions the bone substance was thinned, while at their centres it was entirely wanting, being replaced by a fibrous membrane closely adherent to the dura mater. The arachnoid and pia mater were throughout their whole extent thickened, adherent the one to the other, non-translucent, much congested and traversed by newly-formed vessels. Brain substance normal; slight tubercular deposit in the apices of the lungs; sanguineous effusion in both pleural sacs, with a recent pseudo-membrane; the heart small, with fatty degeneration of its muscles; three or four litres of clear serum in the peritoneal sac, a milky thickening of the mesentery, stomach small, with slight ecchymoses upon its internal surface, kidneys congested, spleen and pancreas normal, liver contracted, Glisson's capsule much thickened, the whole organ enveloped in a cartilaginous easily-detachable covering, and upon the inferior surface of the liver two or three stellate cicatrices or depressions half a centim. in thickness, composed of newly-formed connective tissue. The lobular substance of the organ pale, atrophied and compressed by the prolific interstitial connective tissue. The capsule seemed of an older date, as it showed a more developed organization (elongated fibres with nuclei), while the neoplastic interstitial tissue revealed at various points a different nature, some sections showing a true cell-tissue (embryonic cell-tissue), others veritable fibres with nuclei in part already undergoing fatty degeneration; the liver-cells wrinkled with pigment granules, and in the interior of the organ three masses, each the size of a nut, containing a greenish, purulent fluid.—*Archiv für Dermatologie und Syphilis*, 1870.

Syphilitic Disease of the Brain.—Zeissl makes the following observations in connection with a case of syphilitic disease of the brain: The subject of syphilis of the brain was for a long time uninvestigated, and it is only within the last ten years that anything tangible has been discovered. It has long been thought that cerebral symptoms occurring in persons, the subjects of syphilis, were caused by the pressure of exostoses upon individual portions of the brain or nervous centres. Ricord, in 1831, reported the first case in which he thought he could demonstrate syphilitic disease of the brain. In 1840 he again called attention to this case, adding subsequent observations. A little later, German scientists endeavored to prove syphilis of the brain, that is, to demonstrate changes which were not developed from the bone, but which had their seat in the nervous centres. Westphal, especially, was one of those who showed that the brain suffers peculiar changes through syphilis, and that the white and gray substances sometimes undergo changes analogous to those which in the liver we know as cirrhosis. Virchow has reported cases in which circumscribed tumors of various sizes had been developed at different points in the brain, and which he called gummata, or syphilomata. Our school also helped demonstrate anatomical changes in the brain in consequence of syphilis. Duchek, while still in Prague, published several cases in which he proved that such changes do occur in the brain from syphilis. A more recent discovery is, that pathological changes due to syphilis occur not only in the brain itself or in the cranium, but also in the membranous coverings of the brain, and it was shown by Heidenheim, Griesinger, and later by Meyer, of Berlin, that in syphilis not only the dura mater, but the arachnoid and pia mater suffer changes. These membranes become thickened and adherent the one with the other and with the brain. Furthermore, in the brain of a syphilitic subject points of softening, abscesses, have been found, which have been produced not by pressure from the bones, but by the degeneration of syphilitic tumors. The anatomy of syphilitic disease of the brain has recently advanced with rapid strides. Nevertheless, we cannot always make an unequivocal diagnosis. Only the sequence of the case, and the result of therapeutics, determines our opinion. We formerly considered that we were greatly aided by the theory which was advanced, that those brain-symptoms which were slowly developed more referable to changes located in the cranial bones, for disease of the bone is of slow progress, and exercises, therefore, a gradually increasing pressure upon the brain. That this is not so, is shown by the following case:—

A woman, 41 years old, who was in Prof. Arlt's clinic, with phthisis corneæ and prolapsus iridis, had upon the tibiæ and forehead periosteal tumors, the latter ulcerated. She was becoming gradually blind. She took decoct. Zittmanni. The ulcers were healing and nearly cicatrized, when, on the 4th of December, the patient complained of headache. Cold applications were ordered. The pain was in the occiput. A hypodermic injection was given, which was scarcely done when the patient was seized with convulsions and epileptiform symptoms. Soon trismus, unconsciousness, sopor, stertorous breathing set in, and then paralysis of the sphincters. In the p. m. the trismus became less severe. The author tried the administration of chloroform with but slight result. He gave, however, in one dose, 15 grains of the iodide of potassium and ordered more to be given in the course of the day. In the night the convulsions ceased, but the unconsciousness continued. The urine contained considerable albumen. The iodide of potassium was continued, consciousness returned, the urine and stools no longer passed involuntarily. Five or six days after the attack all the symptoms had disappeared. The author considers that this was a case of gumma. The disease had its origin only in the cranium. A proof of this is the albuminuria, which, according to late researches, occurs in affections of the bones, and especially in syphilitic subjects. Anatomy has shown that, in diseases of the bones, albuminoid degeneration of the malphigian bodies takes place, causing albuminuria.—*Archiv für Dermatologie und Syphilis*, 1870.

A Case of Paralysis Ascendens of Syphilitic origin.—Chavalet reports the case of a man, 39 years old, who suffered from an indurated ulcer with swelling of the glands and from buccal and throat syphilis. By the use of Van Swieten's liquor and the iodide of potassium all these symptoms disappeared and the patient was apparently cured. Subsequently he was taken ill with diarrhœa, which returned upon him after a few days when he was upon duty; he felt weak, with intense pain in the lumbar region, and just as he turned around quickly to pursue a thief, his feet refused to serve him, and he had only time to seek a support to prevent his falling. For two days he was able to get about, and was then obliged to keep his bed. At his entrance into hospital he complained of inability to walk, and of intense pain in the lumbar region. The lower extremities were only capable of passive motion, and their reflex excitability apparently gone, but tickling of the soles caused reflex movements. There was no trace of muscular atrophy; the sense of pain and touch, as well as the temperature, normal; muscular power of the arms and hands unchanged, obstinate constipation from the commencement, no trouble about urination, erections seldom, all other organs healthy. As other syphilitic symptoms were absent, and as the paralysis occurred simultaneously with the diarrhœa, it was considered a case of reflex paraplegia, and wet cups were placed over the kidneys. In the course of a few days the disease involved also the upper extremities. The patient was unable to lift his hand to his mouth, to write, or to seize objects. The inferior extremities were completely paralytic, the pain in the lumbar region continued, and spread up the back to the neck; speech became difficult, slight headache. Sée diagnosticated syphilis of the membranes of the spinal cord, and ordered mercurial inunctions (3 grammes of mercurial ointment), and at the same time 10 grammes of the chlorate of potassa internally. After a few days the patient felt his strength returning, speech became easier, the upper extremities regained their power of motion, at first very slowly but later more rapidly, and the lower extremities, also, by a continuation of the mercurial course, improved; and at his discharge, after seven weeks, he felt only a slight weakness in his legs.—*Archiv für Dermatologie und Syphilis*, 1870.

Effects of a former Syphilis upon Wounds.—Dr. John Merkel, of Nürnberg, relates three cases in which syphilitic symptoms made their appearance when cicatrization was almost complete. One case was one of hydrocele, tapped and treated by Beck's method of incising the tunica vaginalis and fixing it by suture to the external skin. The two others were gun-shot wounds. The latent syphilis did not interfere in the least with the progress of healing; but just when the solutions of continuity were upon finally closing, either eruptions appeared over the whole frame, or unmistakable syphilitic tubercles formed on the margins of the wounds. The author ordered mercurial frictions with the best effects.—*Ærtz. Int. Bl.*, No. 49; *Lancet*, Jan., 1871.

Syphilis of the Nervous System.—Dr. E. L. Keyes contributes a paper upon this subject in which he brings out many important points regarding diagnosis and treatment. The article by Dr. Keyes is based mainly upon cases observed by Dr. W. H. Van Buren, with some observed by himself. Out of thirty-four cases in all, fourteen were of hemiplegia, nine of paraplegia, four of epilepsy, two of facial paralysis, one of paralysis of biceps and deltoid, and four of intellectual derangement. Of these cases eleven recovered, five were materially improved, five were improving, six had died, and in six cases the result was unknown. In the fourteen cases of hemiplegia, the average length of time from contagion to paralysis was a little over five years. Headache was a constant symptom, which preceded the paralysis, and in not one of the cases was there a loss of consciousness. Syphilitic hemiplegia comes on in three ways: 1, gradually, without loss of consciousness; 2, suddenly, without loss of consciousness; 3, suddenly, with loss of consciousness. Paralysis of the face may complicate and last a few days or hours before the hemiplegia. Dr. K. also refers to the coincidence of mydriasis, with or without ptosis, in syphilitic paralyses, either preceding or occurring at the same time, or may occur with any paralysis. In the nine cases of paraplegia the invasion was generally very gradual, without any pain in the back or other local symptom; the bladder became affected in nearly every case, and its paralysis required local treatment, as it did not yield to general treatment. As the cases were seen late in the disease, the nerve-tissue was so much altered that very little improvement was produced in the symptoms. Of the occurrence of headache as a prodromic symptom of syphilitic epilepsy, it was only observed in a single case, and it was impossible to determine whether or not it had occurred in the other three cases. Of Dr. Keyes' three cases of derangement of intellect, one patient was aphasic, the other two were maniacal. The case of aphasia was complicated with mydriasis, and presents no diagnostic points of this symptom; nor do the cases of mania throw any light upon the moot point as to the existence of a mania produced by syphilis. Dr. Keyes concludes with the following very comprehensive summary:—

1. That nervous symptoms depending upon syphilis may arise

within the first few weeks after an infecting chancre, or at any period later during the life of the individual.

2. That it is presumable, from the study of published autopsies, that the earlier a nervous symptom (paralytic or otherwise) occurs, the less likely is there to be any material lesion which an autopsy can reveal; and that in a given case there exists no constancy of relation between the nature, the situation, and the severity of the lesion, and the nature, situation, and severity of the nervous symptom, to which that lesion may give rise.

3. That cerebral congestion is probably the pathology of many of the earlier nervous syphilitic symptoms.

4. That syphilitic hemiplegia occurs, as a rule, without loss of consciousness, even when the attack is sudden; but that the paralysis usually comes on gradually, the patient being under forty years of age, and having had fixed constant headache for some time before the attack.

5. That mydriasis, existing alone, or with other nervous symptoms, without positive disease of the eye, is presumptive evidence of syphilis.

6. That paralyses of single muscles, or sets of muscles, are frequently syphilitic.

7. That syphilitic paraplegia generally comes on gradually, often without any local symptom to call the patient's attention to the injured portion of the cord, and that it is rarely complete. That the bladder almost always suffers more or less, and calls for special local treatment. That paraplegia may be developed as a symptom of inherited syphilis.

8. That syphilitic epilepsy usually occurs after thirty, in patients who have not had epilepsy in early life. That headache is liable to precede the attacks. That the convulsions occur often, many in quick succession, the intermission between the series of attacks being comparatively long, but that, during this period, headache or other nervous symptoms exist and become aggravated, contrary to what obtains in idiopathic epilepsy. That syphilitic epilepsy is liable to be associated with, or followed by, some form of paralysis.

9. That aphasia is often associated with the intellectual disturbances caused by syphilis.

10. That loss of memory is a common nervous symptom of syphilis, as are also all forms of mental disturbance—from mild hallucinations and illusions up to actual insanity, and all these without any necessary accompanying paralysis.

11. That inordinate emotional expressions are often associated with the mental weakness caused by syphilis.

12. That care must be taken to distinguish certain symptoms caused by gout, from the same symptoms owing their origin to syphilis.

13. That the prognosis is better as a rule for nervous symptoms caused by syphilis than for the same symptoms depending on a lesion equal in extent, caused by another malady of the nervous centres; but that, after the arrest of the disease, an indelible impression is often left upon the nerve-tissue, which manifests itself by impaired function, and which treatment cannot overcome.

14. That the iodide of potassium pushed rapidly to toleration, unless the symptoms subside before that point is reached, is the main outline of treatment. That mercury used at the same time or alternated with the iodide of potassium, is often of great value in protracted or inveterate cases; and that tonics, change of air and surroundings, frequently influence the effect of treatment in a marked degree, and may become essentials to success.—*N. Y. Med. Journal*, Nov., 1870.

Case of Gonorrhœal Inflammation of the Spermatic Cord without Concomitant Inflammation of the Testicle. —Dr. Emanuel Kohn relates the following exceedingly interesting case of a very rare form of disease. On the 15th of March, 1865, a house-servant, 46 years of age, was admitted to room 103 of the general hospital; patient asserted, that having been previously healthy, he had contracted gonorrhœa three months previously. As soon as he perceived a discharge, he placed himself under treatment, which consisted of injections (weak solution of sulphate of zinc ?). During this treatment he was taken ill with typhus and the injections were omitted; he recovered from the typhus and the discharge still continued. The patient paid no more attention to his urethral difficulties, but all this time did not have any coitus.

All at once, on the 10th of March, during a paroxysm of coughing, he experienced pain in the right half of the scrotum. The pain continued to increase in severity, and soon were associated with it vomiting, constipation, and finally also fever, with considerable exhaustion, whereupon the patient was obliged to go into hospital. There the abdomen was found to be swollen, and this, in connection with the above-mentioned symptoms (the patient concealing his genital troubles), is the reason why he was sent into the wrong division of the hospital. A careful examination revealed a cylindrical tumor in the inguinal region, which began at the external ring upon the right side, and without sharply defined limits gradually disappeared downwards in the right half of the scrotum. The whole tumor corresponded in its situation to the course of the cord, and upon examination the right epididymis and testis were found to be unaffected, of normal size, and not painful to the touch. The vas deferens was also normal, as far as it was possible, through the touch, to demonstrate this in the lower two-thirds of that portion of it between the epididymis and inguinal canal, but it merged into the above-mentioned tumor. The temperature of the skin overlying the latter was considerably increased, there was no redness, but the skin was not separable from the subjacent tissues and was painful to the slightest touch. The tumor was fully three inches long, one inch wide, and felt somewhat hard. Movement of the right thigh upon the pelvis and paroxysms of coughing gave pain. There was also considerable spontaneous pain (an unbearable sense of weight). There was also considerable acceleration of the pulse, an increase of temperature, thirst, constipation, loss of appetite, and a very striking prostration of a strongly-built man.

A very thorough examination of the genitals resulted as follows :—

1. At the meatus urinarius were to be seen traces of secretion.
2. A slight degree of erection.
3. The urinary powers perfectly unaffected.
4. Neither per rectum nor elsewhere in the region of the genitals (except as above mentioned) could anything abnormal be detected, but the inguinal glands, external to the tumor, were somewhat enlarged.

It remained only doubtful whether or not it was a case of hernia, for the patient vomited frequently, had experienced constipation for several days, and had dated the swelling from a paroxysm of coughing, and upon the afternoon of his admission spasms of the diaphragm (hiccough) had complicated the phase of the case.

On account of the great sensitiveness of the patient, it was determined to wait and merely apply ice to the tumor, and then, as the pain did not abate, ten leeches were applied.

March 16th. Abatement of the pain; tumor still sensitive, but much less so than on the previous day. After several hours' duration the hiccough ceased. During all this time the vomiting did not recur. The constipation continues. An infusion of fol. sen. ex. unc. ad unc. octo, was administered, which caused several copious stools. The gut was therefore pervious. Hence we could no longer doubt we had a case of inflammation of the spermatic cord to deal with, which, within certain limits, was associated with an exudation into the cavity of its coverings. As occasionally a hydrocele complicates an epididymitis, and through the extension of the inflammation there occurs an exudation into the subcutaneous cellular tissue, so that the scrotal integument cannot be raised up in folds from its subjacent tissue, just so in this case, there occurred an exudation upon both surfaces of a rather limited portion of the sheath of the spermatic cord; hence the shape and extent of the tumor, and hence the consolidation of the overlying tissues. This diagnosis was confirmed by the further progress of the case. With a return of the patient's general health, the tumor gradually disappeared, leaving behind a thickened cord, which, in size, considerably exceeded a gut-string. This cord descended without any appreciable limit (demonstrable by the touch) into the normal spermatic cord and was lost above in the inguinal canal. This tumor had gradually reached this condition by the 30th of March, when, as the patient was otherwise in perfect health, at his own request he was discharged.

Whether a complete restitutio ad integrum followed cannot be asserted. Literature gives no report of the ultimate result, confirmed by autopsy, of such an inflammation. From analogy, with other cases, which were under observation during a long period, we can only presume that three to four months are necessary for a return to the normal size.—*Wiener Medizinische Presse*, 1870.

The Urethra after the Rupture of Stricture.—Mr. Timothy Holmes exhibited the parts removed from a man upon whom he had done Holt's rupture operation. The patient was a soldier, 57 years of age, and had had stricture for twenty years. In 1861 he had retention of urine, and an incision was made into the scrotal urethra. He neglected his stricture, and in 1862 was operated upon by Mr. Holt at the Westminster Hospital. After this he neglected to pass instruments, and the stricture again recurred in 1870. At this time he had frequent attacks of retention. A small catheter was introduced with some difficulty, and was left in. There was a tight stricture about three inches from the meatus, another two inches behind that, and an obstruction near the triangular ligament, which seemed to depend upon a false passage, as it was rapidly overcome when the instrument was withdrawn and its direction changed. The retention of the catheter produced severe and frequent rigors, and its constant passage produced orchitis, with diarrhœa and frequent rigors, while if its use was intermitted retention of urine occurred. As it was determined to rupture the stricture, he was placed under the influence of chloroform and the operation was done, and a No. 10 catheter was passed without any obstacle, only two or three drops of blood being lost. During the following night he was very sick and had severe rigors. During the few following days he got along nicely, but then symptoms of pyæmia showed themselves, and he died upon the eighteenth day after the operation. About ten days after the operation, a small soft swelling formed in the lower wall of the corpus spongiosum in front of the scrotum. It was incised, but no pus was found, and it subsided and healed without suppuration. The autopsy revealed secondary abscesses in both lungs and in the liver. The kidneys were large and flabby, and not granular. The heart was fatty and its valves atheromatous. The traces of the stricture remained, but they were both fully dilated. In the floor of the urethra, just anterior to each, was a small longitudinal rent, larger in the anterior stricture. There was no other morbid appearance, neither ecchymosis nor inflammation. Mr. Holmes thinks that a drop of urine had been extravasated through this rent and produced the swelling referred to. There were no inflamed veins to be detected around the ruptured portion of the urethra nor around the prostate. There were two old false passages, one just in front of the membranous portion of the urethra, the other near the bladder, but they were not inflamed. Mr. Holmes remarks that, although this man had no visceral disease, he was in a very feeble condition, and that the operation was undertaken with a knowledge of its danger, but with a conviction that it was the best course to pursue; and he thinks that any other treatment would have been attended with a similar result.—*Transactions of the Pathological Society of London*, Vol. XXI., 1870.

Rapid Dilatation of the Female Urethra in Cases of Stone.—Dr. Alan P. Smith records three cases in which he was successful in removing calculi by rapid dilatation of the urethra, which procedure, he claims, is a safe and easy method for accomplishing the object. The operation is performed as follows: A pair of dressing forceps, with narrow round blades, are inserted into the urethra, which is then to be gradually dilated by the separation of the blades until the orifice of the canal will receive the extremity of the index-finger. This is afterwards to be used as the dilating power. In his first case, a girl æt. seven years, the finger passed freely into the bladder in less than five minutes. When the stone is too large to be passed entire, it should be broken and the fragments extracted, as was done in this case, and in six weeks the patient had entirely recovered. In his second case, æt. 23, and third case, æt. 22, the patients recovered in two months and four days respectively. In all of these cases the hæmorrhage was slight.—*Baltimore Medical Journal*, July, 1870.

Vascular Tumor of the Bladder.—Sir Henry Thompson reports the case of a man, aged 54, who for two years had experienced pain in micturition, with increased frequency of the act. He had also had recurrent attacks of hæmorrhage occurring at irregular intervals. He lost flesh, and was weak. When first seen he could not retain his urine, and it flowed off day and night, and he had constant pain. A No. 8 catheter drew off eight ounces of clear urine, and this was followed by a quantity of florid blood and with much pain. This was followed by temporary relief of pain and involuntary micturition. By the rectum, examination revealed tenderness of the bladder. There was no supra-pubic tenderness, and the act of defecation was accompanied by uneasiness. On sounding the bladder, nothing was discovered but rigidity of the walls. Mr. Thompson diagnosticated villous tumor, and taught the patient to use the catheter, but not to thoroughly empty the bladder, but to leave about an ounce of urine behind. By this the hæmorrhage was rendered much less, and there was relief of the pain. The patient grew weaker, and sank in a few days. The autopsy revealed the presence of two vascular tumors, not strictly villous, but of a remarkable and exceptional character. On opening the bladder, the walls were thicker than natural, while the mucous membrane was of a dark-gray reddish hue. Two red and very flaccid bodies, each about the size and form of a small fig, lay in the cavity, each attached by a slender pedicle at least an inch and a half long, the two then joining in one to be connected to the coat of the bladder towards the back of the trigone. These bodies were of a deeper crimson hue than the surrounding mucous membrane. The pedicles, which were very slender, seemed to be composed of blood-vessels and a little connective tissue. Each tumor was itself formed of a congeries of fine vessels, and very little stroma other than loose connective tissue. The ureters were thickened and dilated, each being about the size of the little finger. Both kidneys were congested. The pelvis of the right kidney was much dilated and contained pus, and pus was seen in the structure of the organ. There were no signs of glandular enlargement in the pelvis, and no similar disease in any other part of the urinary track.—*Transactions of the Pathological Society of London*, Vol. XXI., 1870.

Horny Tumors.—Dr. William H. Pancoast reports the following curious case of extensive horny growths about the face. Captain Levi Becket, a resident of Atlantic City, New Jersey.

When he visited me at my office, on the 27th of last June, his face was in a horrible condition. The whole skin of the nose and cheeks, and a portion of that upon the forehead and lips, was covered with horny sores,—the one involving the left cheek, from which the large horn had fallen, being offensive, and heaped up with horny scabs.

The patient states that he is seventy-eight years of age, has lived most of his life in the open air, as a fisherman and gunner; his health generally good, with the exception of some three or four successive and severe attacks of erysipelas, produced, as he presumes, from exposure to the sun and wind. The last of these attacks he characterizes as malignant.

According to his statement, and that of his daughter and son-in-law, the horns, after this last attack, began to grow upon the nose and both cheeks, and first appeared in the form of small warts, about six years previous to the date of this report. No special treatment was resorted to further than pulling off the warts and applying some herb washes.

The horns continued to grow, and the affection to spread over the face, until about the fourth year of its duration, when the base of each of the two larger horns began to ulcerate, causing them, as he expresses it, to "rot off." The surfaces from which the horns fell became open ulcers, covered over and filled up with horny scabs.

I admitted Capt. Becket as a pay-patient to the wards of the Philadelphia Hospital; placed him under a supporting treatment, and, at the end of three days, I scraped off the scabs before the clinical class, and touched the raw surfaces freely with the crystals of the chloride of zinc. This I applied over nearly the whole face, scraping away the altered epithelium with the handle of the scalpel, and rubbing on the zinc.

This was the treatment, excepting in regard to the ulcer which had been the base of the largest horn on the left cheek. There the disease had been so severe as to destroy the superficial fascia, making a large, circular ulcer, not movable with the skin, two inches in diameter (having the appearance of an epithelial cancer), which involved the periosteum of the superior maxillary and malar bones as far up as, and for the whole breadth of, the lower margin of the orbit. Here I had to use the edge of the scalpel freely, cutting off and scraping away the unhealthy granulations down to the bone.

The zinc application was repeated three times, the last two, on account of the pain produced, while the patient was under the influence of ether. Subsequently it became necessary to give him full doses of morphia to ease his suffering, and a solution of lead-water and laudanum was applied over the face.

As the patient, though much benefited by these operations, declined to submit to them again, I applied the following caustic paste, spreading it over the surface, and leaving it on for a day:—

℞.—Zinci sulphat. exsic, . . ʒ j.
Aq. ext. opii as much as will saturate 1 oz. of water.
Wheat-flour enough to make a paste; and then add
Zinci chloridi, . . . ʒ ij.

This application gave very little pain, and was very efficacious. He continued to improve both in respect to his health and the general condition of his skin. Two ulcers only were left requiring active treatment; one apparently almost cured, and the other, the worse one, on the left cheek, involving the periosteum, much healthier. On the 18th of August, impatient of hospital restraint, he returned home. I heard from him on the 30th of September. He was at home, enjoying his usual open-air life, with his condition much improved. As I consider the ulcer last mentioned to have taken the form of epithelioma, I have fears for an unfavorable result, through the patient's unwillingness to submit to further treatment.—*Photographic Review*, October, 1870.

Keloid Tumor.—Dr. F. F. Maury reports the following case, which possesses many interesting features: Frederick Jourdan, colored (formerly a slave), aged twenty-eight years, admitted to the surgical wards of the Philadelphia Hospital, May 26, 1870. Is a native of North Carolina; he is above the ordinary height, of large frame and very muscular. His family history revealed nothing from which to trace the cause of his disease. Thinks his father had two small tumors, one under the chin and the other on his side, both of which gradually disappeared before his death, the cause of which he does not know. Mother and brothers alive and in good health.

When eight years of age, a small abscess made its appearance on the anterior part of the neck, which, on being opened, discharged an ounce of pus. As the result of this abscess, a well-marked induration followed at the original seat, which gradually extended in both directions around the neck.

After nine years' growth, it had half encircled the neck, and was about two inches in width. Professor N. R. Smith, of Baltimore, at that time removed the growth. The resulting wound healed kindly in six weeks. The line of the cicatrix, however, was speedily occupied by a hard, rounded ridge, which slowly extended and enlarged.

Eighteen months later, an accidental wound was inflicted by an axe on the posterior part of the neck. This wound also presented a hard, nodulated cicatrix, which crept around the neck to join the one in front.

His master now carefully avoided punishment, as the least incisions seemed prone to take on this morbid action. Four years after this date a band of soldiers whipped him severely; each gash, on healing, was succeeded by the hard, elevated ridge, the result of the previous wounds.

Seven years subsequent to Dr. Smith's operations, the tumor was again removed, at which time it had extended around the entire neck. Three months were occupied in the healing of the wound, which also assumed the same morbid action.

At the present time there are thirty-seven tumors of variable size, the large one resembling, in a marked degree, the ruffles worn in the time of Queen Elizabeth. The two original growths are now thoroughly blended, and form one solid mass, touching at the posterior part of the neck. It measures twenty-eight inches in its greatest circumference, and five inches in its perpendicular diameter. It is plicated, and has deep fissures separating the folds, from the bottom of which is exuded a thin, yellowish, offensive fluid. The skin is intact, not having undergone ulceration. There is little or no elevation of temperature; no pain when pressure is instituted, it being only painful from the weight. The entire mass can be moved without difficulty, thereby indicating only a cutaneous attachment. The sensibility of the skin is perfect, the presence of a fly being at once recognized.

The other tumors are situated on the back and right arm, and vary from the size of a pea to that of a medium-sized tomato.

In July, 1870, two of these growths were removed for the purpose of microscopical examination, and also to observe the rapidity of recurrence. For one the ecraseur was used, for the other the knife; in both instances a portion of healthy skin-tissue was removed. At this date, almost three months afterwards, there is a well-marked tendency to the development of new growths in the same place.

The following careful microscopical examination was kindly made by Dr. L. A. Duhring: "To the naked eye, upon section vertically through the tumor, the cut surface presented a structure close and compact in appearance, of a yellowish-white color. To the touch it was tough, resisting, and firm, with a certain amount of elasticity, and upon pressure exuded a thin, pale, straw-colored liquid."

Microscopical examination: "After being prepared in solution of bichromate of potassa and alcohol, vertical sections were made and examined in glycerine. The horny layer of the epidermis was thin and scanty, the cells themselves being well broken up, and many of them having undergone granular degeneration. The cells in the upper layer of the rete mucosum seemed closely packed together and unusually numerous, while the deeper layer contained the pigment cells well colored.

"The mass of the tumor was composed principally of connective and elastic tissues, the former being disseminated throughout, while the latter appeared here and there in the form of good-sized, well-developed elastic bands, running both transversely and vertically. Fat was found in some parts in fine globules.

"Long, wavy bundles of connective tissue were seen running in striæ transversely, just beneath the papillary layer. Here and there a cut sebaceous gland was found.

"In some of the fields a loose net-work of connective and elastic tissue, intermingled, was present, with globules of fat. Connective-tissue cells, long and twisted, were to be seen, sometimes approximating each other, and again scattered."—*Photographic Review*, October, 1870.

A Peculiar Inflammation of the Lower Lip. (Cheilitis Glandularis Apostematosa.)—Prof. R. Volkmann, of Halle, has five times observed a peculiar form of chronic inflammation of the lower lip, concerning which he finds no account in literature. All the patients were adults. Three had been suffering from constitutional syphilis a short time before. Two were quite healthy, and assert never to have been syphilitic.

The course of the cheilitis was similar in the five cases, though of different intensity. The lower lip gradually swelled, without much pain, and became hard and firm, so as to give the countenance a coarse, disagreeable expression. The mobility of the lip was much impaired, in one case lost. The swelling extended through the thickness and breadth of the lower lip, and down to its union with the chin. In one case it affected the upper lip about the corners of the mouth.

The skin was slightly reddened. In all cases the mucous glands of the lip were swelled to the size of hemp-seeds or more, and could be felt through the mucous membrane in unusual numbers and extent, as nodular masses. Their excreting ducts were much dilated, some of them large enough to admit a fine probe. Pressure, which caused but little pain, would evacuate from them a turbid mucous or mucopurulent secretion.

In three cases abscesses formed, which evidently likewise proceeded from the glands, or at least from the periacinous areolar tissue. With comparatively little pain, furunculous inflammation developed in the midst of the lip, which perforated either the skin or mucous membrane with fine openings, that had the greatest tendency to become fistulous, and discharged a mucopurulent secretion for weeks and months. In one case the mucous surface of the lower lip showed from twelve to fifteen such openings; the latter never gave rise to ulcers proper, nor indeed could any syphilitic ulcerations or plaques be detected on the lip or anywhere about the mouth. In all cases, however, existed a pretty active catarrh of the mouth and fauces.

Two cases were extremely obstinate, and left hospital with little improvement; the other three were cured in from four to eight weeks by the internal use of iodide of potassium, mouthwashes of chlorate of potassa, and light cauterization of the lip.

As the disease consists essentially of an inflammation of the mucous glands of the lip, the author proposes the names of *cheilitis glandularis* or *myxadenitis labialis.* (*Virchow's Archiv, Bd.* L.)—*St. Louis Med. and Surg. Journal*, 1870.

On Molluscum Contagiosum.—Professor Ebert, of Berlin, related in the section for Diseases of Children of the late Meeting of Physicians at Imrstruck (1869), the history of a case of molluscum contagiosum. In a girl aged fourteen, tumors of the size of lentils had gradually developed on the eyelids, and then in the entire face, so that at the time of her admission to hospital, 108 of them were present in the face. They increased to the size of hazel or walnuts, and were so densely grouped on the eyelids that they perished by necrosis from pressure. In the centre of each tumor could be discovered a dark punctiform opening, from which uniformly applied peripherical pressure would express a tallow-like plug, made up essentially, according to Virchow, of epidermoid proliferations, similar to cancroid. The disease spread to three children who occupied the nearest beds and came in contact with each other more particularly. Inoculation on a dog, as well as a subsequent one upon the author himself, gave negative results.—*Archiv für Dermatologie und Syphilis*, 1870.

On the Specificity of Varicellæ.—Dr. Bolze, of Prague, treated a boy aged nine affected with varicellæ. A sister of the patient, who nursed the latter with great care, remained unaffected, but was delivered, eight days after the recovery of the boy, of a male child, whose skin was covered with innumerable papulæ. These developed into perfect umbilicated pustules, and the infant died during the acme of the suppurating process.

Here was a case of variola in the child proceeding from varicella which had not affected the mother.—*Archiv für Dermatologie und Syphilis*, 1869.

A peculiar Affection of the Hair-Follicles and Sebaceous Glands, Sequela of Variola.—Dr. I. Neumann, of Vienna, describes a disease of the hair-follicles and sebaceous glands of the face, especially the nose, following an attack of small-pox, and causing considerable disfiguration. After the scabs have fallen off, there appear wart-shaped excrescences with the mouths of the hair-follicles and glands upon them, at first pale, afterwards of a dirty-brown color. They have been described under the name of *variola verrucosa.* Dr. N. supposed them to arise from hypersecretion in the glands during the inflammatory process of the skin, when the secretion is prevented from escaping by mechanical obstruction by the scab which covers the mouth of the follicle. After the removal of the scab, these protuberances increase for a few days, because the pressure of the scab is taken off, then gradually diminish, and finally disappear. They disfigure the face for weeks and months after the recovery from small-pox. Sometimes, however, they lead to an inflammatory seborrhœa, which may remain for years, unless removed by art.

These cases sometimes give rise to an eruption of acne, or very rarely to lupus erythematodes. Sometimes, also, they give origin to larger reddish warts, not unlike the gonorrhœal warts. These little tumors contain in their interior a small cavity, filled with dark-brown, crumbling masses of sebum. They occur only after severe cases of small-pox, and effect considerable disfiguration of the nose. The treatment should be the same as that of seborrhœa acne. (*Wien. Med. Presse.*)—*St. Louis Med. and Surg. Journal*, Sept., 1870.

Favus Primarily Developed on the Glans Penis.—Dr. F. J. Pick, of Prag, relates a case of favus on the glans and in the coronary sulcus. Scutula were present only in the localities named, while the closest inspection from head to heel detected none upon the rest of the body. On the inner side of the thigh, however, near the root of the penis and scrotum, were several red spots of the size of small coins, bounded by a circle of small nodules and vesicular efflorescences, and covered with scales and crusts; *i. e.*, the herpetic preliminary stage of favus. Corresponding spots on the scrotum presented the same picture. The author searched carefully for the presence of little hairs on the glans or in the sulcus, but none could be detected—another proof, he points out, that the development of the fungus of favus is not confined to localities where hairs exist, as erroneously stated by many authors, and especially Bazin.—*Archiv für Dermatologie und Syphilis*, 1869.

Pathology of Alopecia Areata.—Dr. L. A. Duhring refers to the discordant views as to the parasitic or non-parasitic origin of this disease. He regards the fall of hair as due to impaired nourishment of these structures, and has failed to find a parasite. He thinks that minute aggregations of sebum are the substances mistaken for the parasite.—*American Journal of Med. Science*, July, 1870.

Pathology of "Lichen Scrophulosorum."—Dr. M. Kohn regards the process of *lichen scrophulosorum* as consisting of an exudation of cells into and around the hair-follicles and their sebaceous glands, as well as the papillæ surrounding the mouths of the follicles.

The exudation begins at the base of the follicle and gland, *i. e.*, from the vessels passing from the subcutaneous tissue to the parts mentioned. It is manifested under the microscope by a collection of exudation-cells, at first around the vessels named and among the connective-tissue fibres accompanying them, and surrounding the base of the follicle and the wall of the sebaceous gland.

The process advances by accumulation of a great number of such cells around as well as within the follicle and gland of the hair, by loosening of the cells of the root-sheath of the hair from the wall of the sebaceous gland, and cell-infiltration into the adjacent papillæ.

The infiltration of these papillæ with cells and serum causes them to swell and redden, whereby they become visible and palpable as nodules of characteristic properties, with a central depression corresponding to the follicular mouth. The accumulation of epidermis in the dilated growth of the hair-sac forms the central scale of the papule; the collection of serum under the superficial cell-strata forms the central vesicle or pustule.

The process recedes by molecular breaking-down and absorption of the exudation-cells, when the follicles, sebaceous glands, and papillæ return to their normal condition; or else the cells, especially in the centre, break down, giving rise to a small abscess, in consequence of which the root-sheath is separated from the shaft of the hair; its cells also decay, the hair falls out, the fibres of the follicle undergo mucous degeneration, the follicle itself wastes, the papillæ around it become atrophic, and thus a level cicatrix replaces the lichen nodule.—(*Archiv für Dermatologie und Syphilis.*) *St. Louis Med. and Surg. Journal*, 1870.

Lupus.—There seems to be a tendency to the formation of large quantities of germinal matter in lupus while the formed material is scanty. The capillaries going to a lupus papule are twisted around the clubby kind of cells. This disease chiefly attacks the connective tissue of the true skin. The elementary cells of the part undergo abnormal alteration of a permanent nature, leading to new formation. Dr. Buchanan considered lupus as a new or morbid formation, produced in two ways—first by the excitement of the nutritive energy of cells, so that they are stimulated to accumulate in their interior substances such as pigment, which were not there before; and, second, by excitement of the reproductive energy of cells, so that they are stimulated to divide and multiply till new parts are formed. These new parts are either made up of cells similar to those from the visitation of which they originally sprung, or the cells composing them have become more or less modified in the process of repeated division. If the parts be still similar in elementary structure to the surrounding tissue, or at all events not much modified in the process of repeated division, so as to be easily traced back to the origin in the tissue, they are called *homologous* or *benignant* formations. If quite dissimilar, we call them *heterologous* or *malignant* new formations. Finally, the heterologous new formations may be divided into *pseudo-plasms* and *neo-plasms*, the former lupus being incapable of independent growth, but extending by implication of the surrounding tissue, the latter as cancers, containing fertile elements within themselves.—*Journal Cutaneous Medicine*, March, 1871.

Therapeutical Notes.

The Value of Hydrotherapeutics in Syphilis.—Dr. William Winternitz states, that the statistical report of the Institution of Kaltenlentgeben and Vienna shows that the hydrotherapeutics alone had no effect at all upon syphilis, but that when it was combined with anti-syphilitic remedies, exercised a very beneficial influence in shortening the duration. Drs. Kreyser, Scharlan, Plitt, Fleury, Delmar, and others, used the combined method of treatment, and they all testified to its advantage. The tone of the skin is preserved, and cachexia is prevented, the absorption of specific remedies favored, and the latter always tolerated. The general health of the patient is much better, and the tendency to relapses far less liable. The object of the hydrotherapeutics is to insure an increased action of the skin, to regulate the circulation, and to influence the circulation in diseased organs by direct or reflex action. They influence the abnormal heat and also its sources, which are to be found in the tissue change, and, by increasing and decreasing the production of heat, they affect in the same way the metamorphosis in the tissues. In all cases this treatment is indicated, for the reason that the action of the medicine is far more intense, and consequently much smaller doses are sufficient. The method is the following:—The patient is subjected to a preparatory cold rubbing, or a shower-bath, in order to cleanse the skin thoroughly and increase the cutaneous circulation. After this preparation the patient is brought into a profuse sweating, either by preventing evaporation or by direct application of heat,—for instance, wrapping in blankets, or the vapor-bath. After a repeated sweating, this action of the skin will be excited in a much shorter time, and to a greater degree. This treatment is generally resorted to in the afternoon, after the patient has exercised in the open air, not every day, but every two or three days, according to the urgency of the case. The dry-packing and the vapor-bath are used alternately, and during the interval wet-packing is resorted to in the morning for from three quarters to an hour and a half, followed by a cool bath. The latter has a tonic effect on the skin, and is very useful in cutaneous affections. The procedure of cooling the body after the sweating allows the treatment to be carried on for a long time. The greatest loss of body-weight that has ever been observed is said to have been four pounds. It is now definitely settled that perspiration also contains the elements of the urine, and that the latter are the result of the destructive assimilation from the albuminoid tissues. Now, as these tissues probably are in direct relation with the virus, the increased action of the skin and kidneys must be of great importance. Through the loss of water absorption becomes much greater, and thus many changes in the nutritive process manifest themselves. A moderate diet and a regulated amount of drinking-water further influence these processes.

That the whole nutrition of the body and the general health are greatly favored, is seen from the result of the treatment of constitutional syphilis, in broken-down anæmic persons with suspicious respiratory troubles. The tonic action of the treatment is shown by the rapid reaction and increasing warmth of the body. In anæmic and cachectic persons the treatment must be done at a very low temperature, quite contrary to an idea generally entertained, and must be associated with brisk mechanical stimulation (rubbing, packing, etc.), and only last a very short time; the douche for a few seconds, dry-rubbing for a short time, or packing the body in very cold fine cloth well wrung out. It is in these cases of suspicious pulmonary symptoms that the author has succeeded by the combined method in curing the syphilis and the pulmonary diseases in the greater number of cases, in some with the addition of a strict milk-diet; and by this means he brings the system under the influence of medicines which, prior to the treatment, had not been tolerated. In regard to the more rapid absorption of the medicine under these circumstances, the author refers to the testimony of Fleury, Margrot, and others.

The use of mercury with the water-cure leads very rarely to salivation, although given in smaller doses, which may be explained by a more rapid excretion of the drug. Another great result of the treatment is, that a delicate state of the constitution is prevented, and that such patients can spend the day in the open air, even in bad and cold weather—a very great service to the patient and great advantage to public institutions.—*Archiv für Dermatologie und Syphilis*, 1870.

On the Treatment of Syphilis by Drugs.—Dr. T. B. Crosby, in the Oration before the Hunterian Society, 1871, made the following allusions regarding the treatment of Syphilis: In all syphilitic lesions which show, either in their early stage or subsequent progress, signs of induration, either at their base or in a neighboring lymphatic or its gland, mercury is a most valuable remedy. Experience has proved that the boundary-line between infecting and non-infecting sores is not so easily defined at first sight as it was supposed to be by M. Ricord and other modern authors, and that there is a form of soft suppurating and apparently non-infecting sore, which is liable to assume, during its progress, the character of induration, requiring a guarded prognosis. On this point, during the early days of the new and important method of diagnosis, I witnessed many errors made by others, and made many myself. There is a typical unmistakable form called Hunterian, which is certain to be followed by secondary symptoms; also that there is a typical soft, suppurating, mucous sore, which will as certainly escape such consequences, there is no doubt. I do not believe in the duality of the poison: I regard the difference of the character of lesion as due to modified intensity of one, rather than to plurality of poisons. I have noticed that whenever the poison is sufficiently strong, either to destroy tissue and produce phagedæna, no matter whatever be the situation of the sore, or to produce any lesion on true skin-surface, constitutional symptoms most frequently follow, although induration may not appear for two or three weeks.

In these cases, where induration is late in appearance, the constitutional effects are generally mild in direct proportion, leading me to conclude that the early appearance of adhesiveness is the test of the severity of the poison, and its non-appearance at any period little or no proof of its plurality.

The curative properties of mercury may be and are by modern practice obtained without any ill results to the constitution; gastric irritations may be avoided by its external employment; its tendency to blood-blanching guarded against by the simultaneous administration of quinine or iron. The bugbear of its cumulation and retention in the system may be satisfactorily disposed of by the action of its copartner, iodide of potassium, forming with the mercurial albuminate a soluble salt, which is readily eliminated by the various secretions. To the non-mercurialist believer in the treatment of syphilis, I must say that the only cases of syphilitic epilepsy which I have seen, occurred in patients who had not been treated by mercury.—*British Med. Journal*, February, 1871.

Therapeutics of Chancre-Buboes.—Zeissl, in his published lectures upon chancre-buboes, advises the following therapeutics: Upon the first sign of a glandular swelling, all irritation (cauterization) of the chancre should be avoided, and the patient put to bed. Ice-poultices should be placed upon the tumor, provided pulmonary catarrh is not present. Zeissl expects nothing from leeches. Suppuration having begun, warm poultices should be ordered. The opening (in the case of small buboes, or such over which the skin is in a sound state) should be made with a knife; the incision parallel to the inguinal fold, and dressed with Lister's carbolic acid paste. Instead of incision, Zeissl sometimes practices puncture, which he performs beneath the surface of water in a bath, and covers the opening with a layer of plaster of Paris.

For cauterization, he uses the caustic potassa or the Vienna paste. After the application of the latter, Zeissl never applies poultices to the slough, as they are supposed to favor gangrene. For open buboes the same treatment is applicable as to the chancre.—*Archiv für Dermatologie und Syphilis*, 1870.

Hypodermic Use of Mercury in Syphilis.—Bricheteau speaks very favorably of the hypodermic treatment in syphilis. He finds, however, that all the preparations, even the sublimate, are less suitable than the biniodide of mercury and soda. He dissolves 1½ grammes of this in 100 grammes of distilled water. Twenty drops of this solution contain 10 milligrammes of the biniodide. We should begin with 10 drops and increase to 20, injecting every second day.

Scarenzio, in Pavia, has tried calomel, but has always produced abscesses; Berkeley Hill and Lewin prefer the sublimate; Aimé Martin has lately, in two cases, used the red iodide of mercury (4 C+gr. to 1 gramme of dist. water) with good results. To dissolve the iodide of mercury, he mixes it with the iodide of potassium.—*Archiv für Dermatologie und Syphilis*, 1870.

On the Treatment of Scrofulo-Derma.—Mr. J. L. Milton admits that the term scrofulo-derma is not a perfectly satisfactory one, but that there is no other which expresses the idea meant any better than it, or even as well; hence he adopts its use. He makes some practical remarks upon the treatment of these affections. He states that he has tried every remedy which has been recommended by the various authors, and he regrets that they are not sufficiently explicit and pronounced in their opinions of drugs, but vaguely suggest that they are *suitable*, *applicable*, or *beneficial*. He states that in his treatment of these affections he has tried all the bitter tonics, mineral acids, iron, cod-liver oil, etc., as well as the most nourishing diet, and such powerful remedies as iodide of ammonium, bromide of potassium, and iodine and its compounds. His conclusion is, that he never derived any permanent benefit, and that, in the majority of cases, they are worse than useless. He admits that, for instance, if there is an inter-current weakness of appetite, a bitter tonic may be beneficial, but it is not otherwise. He thinks that quinine and preparations of cinchona very frequently disturb digestion and produce headache, and that the beneficial results of iron, in many cases of anæmia, are due to a belief in its virtues rather than observation of its results. He thinks that animal food, malt and spirituous liquors, are useless, and frequently injurious; that cod-liver oil combined with tonics never did any good, and that iodine in small doses is inert, and in larger ones harmful. He attributes this reputed beneficial action of these agents to the natural tendency of scrofulous ulcerations to get well. The remedies which have been really beneficial in his hands have been purgatives, and he states that his results have been good. He does not recommend them as a certain means of cure, but states that their judicious employment rarely fails to do some good, and frequently tends to improve the health and induce healing of the ulcers. He has employed in his practice mercurials given at night and followed by salines in the morning, and has pushed them to the point of free purgation, and continues this course for a long time. After the employment of this course for some time, he gives an acid solution of iron, which is used at the St. John's Hospital, of which the following is the formula:—

A few pieces of clean iron wire, drawn with the magnet, are dropped into a pint of hydrochloric acid, 11·60 specific gravity; at the end of a few days a strongly saturated solution is formed, and of this ten to fifteen minims are given in a large wine-glassful of water two or three times a day.

A child of five or six years will bear six minims three times a day. It is necessary to remember, however, that the use of the iron is not to interfere with that of the purgatives. Though he does not know the *modus operandi* of this medicine, still he does not think that it acts as a tonic, but states that it arrests the secretion of serum in eczema when other tonics fail. If purgation is employed during cold weather, especially if the patient is underfed, he gives cod-liver oil, but is not confident of its benefit. As to topical remedies, the most valuable is, in his experience, the acid nitrate of mercury. He uses it in the following manner: A piece of lint is rolled up into a firm ball of the size of a pea and secured to a small stick; this is dipped into the acid and applied to a part of the surface. Having water at hand, if any smarting is produced the part should be plunged into or bathed freely with water. The ulcer is then covered with clean soft cotton firmly applied by a binder, and removed by soaking with water the next day, when the acid is to be again applied. He thinks that ointments, lotions, fomentations, impermeable dressings are useless, expensive, and dirty. As regards diet in these cases, he advocates one which is plain and simple, and should consist of brown bread, milk, meat, ham or bacon well broiled, vegetables and fruit, and wine in moderation, and that, while these patients should not be exposed to fatigue, they should be as much as possible in the open air. He recommends a moderate amount of bathing, but does not advocate medicated baths; and while he advises change of air, he attaches less importance to it than many do. He thinks that violation of the laws of health is productive of scrofulo-derma. Though he places much reliance upon his course of treatment, he does not desire to convey the idea that it is absolutely certain and reliable. He simply claims for it simplicity, and says that what it cannot produce is not produced by other methods of treatment.—*Journal of Cutaneous Medicine*, June, 1870.

On the Treatment of Carbuncles.—Dr. William Marcet, of London, offers the following suggestions on the treatment of carbuncle. He says: The first sign of a carbuncle is usually denoted by a sensation similar to that produced by a slight prick with a pin, occurring when the hand is passed over the affected part. Nothing may be seen yet on the skin, but some few hours later a small vesicle appears, when the pain becomes more acute, and may be caused by the mere contact of the clothes. If the carbuncle be allowed to proceed, say for twelve hours beyond its very first appearance, it will run its usual course; but its progress may be arrested by the early destruction of the vesicle, and its contents by means of the cauterizing action of heat. I have adopted many plans to effect this purpose; but the simplest of all, and one which may be considered as always at hand, is the use of an incandescent lucifer-match. The vesicle is to be merely touched, for a fraction of a second, with the red-hot point from five to seven or eight times in succession, when it assumes a dull-whitish appearance from the coagulation of the albumen it contains. The end of a hot wire may also be used. The pain of the operation is really trifling, and it will save from a week to a fortnight's suffering. I have repeatedly applied this form of actual cautery to myself, and shall not hesitate to do so again if necessary.

In general, within four or five hours after the operation, the pain from the incipient carbuncle has in a great measure disappeared, and there is an end to it. It may happen, however, that the carbuncle, at its origin, is deep under the surface of the skin, when no vesicle appears. I have not been so successful with the use of the actual cautery in these cases as in the others; but probably, had the cauterization been carried deeper, the mischief might have been arrested.

The present treatment suggested itself to me from a consideration of the nature of the vesicle which precedes a carbuncle. This vesicle appeared to me to contain a virus, which was the real cause of the subsequent inflammation, and I concluded that by destroying this virus the carbuncle might be "nipped in the bud." I have tried the local application of nitrate of silver, and nitric acid, but they cannot be relied upon, and I fully believe that nothing will act so satisfactorily as the cauterizing action of heat. I may observe that, for the treatment to be successful, it should be applied as soon as possible after the first appearance of the carbuncle. The progress of boils in this country could probably be arrested in the same way, and it might be worth the while to try whether Indian boils might be cured by the present means.—*Lancet*, Jan., 1871.

Iodoform.—Prof. Tanturri has lately used an ointment of iodoform in prurigo. This compound, which was first brought prominently into notice by Bouchardat, is now, owing to its anæsthetic properties, being used in skin diseases with intense pruritus. Its odor is said to be much more agreeable than that of chloroform (*sic*), resembling saffron. It is recommended by Moretin and Humbert as a substitute for iodine. It exercises a local anæsthetic effect upon the sphincters, and therefore forms an admirable ingredient for suppositories in tenesmus and hemorrhoids. C. Moutie's formula is—

R.—Iodoformi . . . . . gr. xx.
Ol. Theobroma . . . ℥j.
Ft. suppos. no. sex.

For frictions the ointment should be made of the strength of one drachm to the ounce.—*Journal of Cutaneous Medicine*, No. 14.

Balsam of Peru in Scabies.—This remedy has lately been spoken of as a substitute for styrax in itch, and it is claimed that it is equally as efficacious and more easily applicable. Though more expensive than styrax, it is actually cheaper in practice, as much less is used. The advantages of its use are, that there is no necessity of detention in a hospital; the patient is stripped and rubbed firmly from head to foot, but not so roughly as to chafe him. It is absorbed into the cuniculi and destroys the eggs, and the whole parasiticide process may be accomplished in an hour. A second rubbing may be instituted in about ten days, as some stray acari may infest the body from the clothes, but there is no necessity of baking or disinfecting the latter.—*Edinburgh Medical Journal*, May, 1870.

Clinical Records of the Therapeutic Value of Iodine in the Treatment of Syphilis.—According to Mr. Berkeley Hill, it is of first importance, in considering the power of iodine to subdue syphilis, to determine the stage during which the drug is most serviceable, and what are the forms in which the disease betrays itself during that stage.

Iodine is, he says, unquestionably of high value in all the skin affections characterized by prominent or deeply-set tubercles in the skin, and those marked by ulceration rather than by desquamation. In the visceral forms of syphilis also, in periosteal and osteal affections, and in muscular tumors, the extreme value of iodine is beyond doubt. This indisputable effect of iodine in certain forms, and the prejudice against mercury, have led many practitioners to employ iodine for all the phenomena of syphilis. This Mr. Hill believes to be a mistake, for two reasons. The first: that he has never been able to trace any result from the exhibition of iodine either for the initial sore or for the roseolous and papulo-scaly eruptions on the skin. Undoubtedly, these symptoms may disappear while iodine is being taken; but it has not yet been shown that they do so with greater rapidity than when the patient is subjected to no specific treatment whatever. The second: that he is strongly convinced that the earlier the disease is controlled, the more likely is the patient to escape a tedious course and the dangerous sequelæ of syphilis. Consequently, he regards the iodine treatment of early syphilis as a loss of valuable time, and as an exposure of the patient to the chance of ultimate, and possibly avoidable, suffering. The converse is, however, unfortunately not always true: the best and most careful treatment of syphilis at the outset is not a perfect safeguard against a severe course of the malady. Nevertheless, every year increases his confidence in the protective value of a judicious early treatment.

Mr. Hill believes that iodine is generally given with advantage to feeble persons, whose eruption is pustular rather than bullar; but even here he thinks it possible that the stimulant effect of iodine is the chief benefit derived from the drug, and mercury should follow the iodine as soon as the restored vigor of the patient will allow; and if, in such cases, iodine alone is relied on, the disease commonly recurs in the same or some other form. Iodine, therefore, he considers useless in all initial sores, and in early scaling or muscular eruptions, but often serviceable as a preliminary to mercurial treatment for debilitated persons.

But even when unquestionably appropriate, it should always be followed by mercury. When the patient is apparently restored to health, he should at once begin a course of small doses of mercury, given continuously, or with occasional short intervals of iodine, and lasting four or even six months. The dose of mercury need not be sufficient to produce any soreness of the gums; slight sponginess is all that is needed. A fifth or a fourth of a grain of perchloride in the twenty-four hours, given with cinchona solution and hydrochloric acid, is very effectual. Ammonia should not be used in any form with the mercury, for it has been shown by Mr. Martindale, Teacher of Practical Pharmacy and Dispenser in University College Hospital, that the perchloride, when mixed with ammoniacal salts, is gradually but completely precipitated from solution as ammonio-chloride; hence, though this precipitate would be dissolved in the stomach and produce its proper effect, the chance of its remaining as sediment at the bottom of the bottle renders ammoniacal solutions of mercury uncertain and unfit for internal use. Simple distilled water dissolves the perchloride quite sufficiently for this purpose.

Iodine is also useful, when given after a mercurial course, to prolong the influence of mercury which has been given early in the disease. In such cases it will frequently control even scaly eruptions, which otherwise would be slow to subside. This effect has been attributed to the fact of the mercury, which has been deposited in the tissues, being re-dissolved into the circulating fluids.

The modes of giving iodine vary much with the individual. Small doses of two or three grains, three or four times daily, should be combined with some aromatic or astringent tincture or infusion to prevent the irritation of the alimentary canal that sometimes occurs. But these small doses soon lose their effect, and must be gradually increased by about one third at successive steps. This rule holds good also for large doses. If a patient ceases to derive benefit from twenty grains, the increase should at once be made to thirty, for a smaller addition to the dose seldom has any effect. The augmentation should be continued until the disease has disappeared, or until symptoms of iodism show that no more can be borne. In the latter event the use of iodide should at once be discontinued for a short time, and subsequently resumed in some other form. For example, if iodide of potassium has been previously used, the sodic or ammoniac iodide should be tried, and that in half the former dose. Sometimes it happens, after taking long courses of iodide of potassium, that the stomach grows intolerant of the alkali, the tongue becomes white and furred, the stomach loathes food, and the syphilitic symptoms cease to show any abatement. This condition is often not comprehended by practitioners, who abandon the iodide (or are themselves abandoned by the patient), and take to mercury or some other drug, which in such a state of the alimentary canal can command no success. A dose of blue-pill and colocynth, with a few days' treatment with nitro-hydrochloric acid, and complete abstinence from alcoholic drink, will, however, speedily restore the appetite, clear the tongue, and render the patient again able to take the iodide. Mr. Hill has known a disordered stomach to make iodine inoperative, even when that drug had been taken for only a short time. In one case he was applied to by a medical man for advice about a very painful node on which iodide of potassium produced no effect. He found that the stomach was considerably deranged, and prescribed some simple remedy for its condition before making a further attempt with the iodide. Then, on the iodide being resumed, the patient was immediately relieved of the pain and swelling, which it had before failed to influence. Again, the use of iodine can sometimes be prolonged, after the system has tired of it, if combined with sarsaparilla, of which the most useful forms are, in Mr. Hill's opinion, the liquid extracts of Bell or Squire. One, two, or even three drachms should be given in half a pint of water, with the requisite dose of iodide, about midway between, or two hours after, meals. Ammonia very greatly assists the effect of iodide of potash in debilitated patients. It is a more valuable adjunct than the salts of iron even. Four or five grains of the sesquicarbonate may be added to the draught of iodide. Bromide of ammonium added to the iodide has apparently also a good effect in the nervous affections of syphilis. With regard to the form of iodide to be employed, the salts of potassium, sodium, and ammonium alone can be trusted to produce marked effects of iodine; but which of these is preferable Mr. Hill hesitates to decide. The taste of each of them is, perhaps, equally disagreeable; but the sodic and ammoniac forms, having smaller equivalents of alkali, furnish a larger amount of iodine, weight for weight, than the potassic. Empirically, he has not been able to detect any particular advantage in any one of these salts over the others. Either of them, if pushed too far, will produce iodism; and the same patient will at one time bear one better than another. He has not been able to detect any difference between the effects of these three salts, except that each is useful for ringing a change in cases where the use of iodine must be long continued.

The toxicological effects of iodine are various. That most commonly complained of is irritation of acne pustules in persons subject to that complaint. The appearance of this symptom always indicates a short course of acids; so do the dry, red tongue so well described by Mr. L. Parker, coryza, and the other decided signs of iodism. Flat papules and flat pustules of the skin are so rarely produced that they should never be waited for as a sign that iodine has been pushed too far. Nevertheless, Mr. Hill has seen them produced on two occasions when very few grains of iodide had been taken. The subjects belonged to a rare class, which appears to be constitutionally unable to take iodine in any form.—*Lancet*, March 4th, 1871.

Treatment of Urethral Stricture.—At a meeting of the Medical Society of London, Mr. J. D. Hill gave an analysis of 120 cases of stricture treated by Holt's operation, and 20 cases treated by perineal section. Of the cases treated by Holt's instrument there had been two deaths, in patients having some organic disease, and 118 recoveries; of the cases treated by Syme's method, there were no deaths. Mr. Hill arrived at the following conclusions: that Holt's operation is the most satisfactory method of treating any form of organic urethral stricture, which is amenable to dilatation, and with care to preliminaries it has no greater risk than catheterism, and where the latter produces bad results it is contraindicated. Its advantages are: 1. Promptness of dilatation; 2. Immediate relief to the urinary organs, and to the general health; 3. Freedom from chronic discharge so frequent in gradual dilatation; 4. It is attended with scarcely any more pain than catheterism, and rarely with hæmorrhage; 5. It is rarely followed by rigors or inflammation; 6. It is well adapted to relapsing cases; 7. Is attended with a low rate of mortality, probably less than gradual dilatation. Mr. Hill thinks that Syme's operation is a satisfactory one in impermeable strictures of the bulbous and membranous portions, and those permeable strictures of these parts in which catheterism produces severe symptoms. Mr. Hill thinks divulsion should always be employed when an instrument can be made to pass, and that the mucous membrane is not ruptured.—*Lancet*, Dec. 10th, 1870.

Treatment of Nocturnal Incontinence of Urine.—Dr. William Thomson, *apropos* of Dr. Yeo's treatment of this disease, remarks that a case of a girl, aged twelve, recently came under his care, who had been suffering from it for two years. She looked healthy, not at all anæmic; appetite good; in fact enjoyed perfect health, with the exception of the frequent desire to pass water, and the inability to retain it during sleep. Dr. Thomson thought hydrate of chloral might prove of service, and accordingly ordered her fifteen grains every night on going to bed; to fast from seven P. M. to the following morning, and to eschew beer and spirits. He did not see her for two days, when her mother informed him she was cured. The very first night she rested well, and did not get up once instead of four or five times as formerly, besides wetting the bed nightly. She still had the desire to go frequently in the day-time. She was directed to continue the medicine for a fortnight, decreasing the dose to ten grains. She then discontinued the remedy entirely, and was perfectly well when he last saw her. He records a second and a similar case occurring in a boy aged thirteen, when the same happy result followed the use of the chloral hydrate. He considers this plan to be very simple, while it is unattended with the unpleasant effects of belladonna on the vision. When the case is one of habit, the chloral acts by ensuring the bladder and sphincter vesicæ a quiet night's rest, enabling them in a few days to regain their normal tone, and the patient his wonted vigor, so that he may retire to rest without his former dread of a disturbed night, or of awakening in the morning to find he is a defaulter to the laws of cleanliness and health.—*Lancet*, November, 1870.

Sarsaparilla in Syphilis.—Dr. J. G. Da Cunba, of Bombay, confirms the opinion expressed by Dr. Clifford Allbutt as to the use of large doses of sarsaparilla in syphilis. Dr. Da Cunba has used it for ten years in a locality in which it grows, and states that the people of India use it as a cure for skin diseases. He gives it in doses of from four to eight ounces of the decoction three times a day, and he states that his success has been beyond his expectations. He, in most instances, combines with each dose of the sarsaparilla three to five grains of the iodide of potassium, and, believing that almost every case in that region is complicated with malarious infection, he combines a few grains of quinine also. He cites cases, showing the good results of the treatment.—*Practitioner*, September, 1870.

New Instruments.

ON AN IMPROVED VULCANIZED INDIA-RUBBER CATHETER, FOR RETAINING WITHIN THE BLADDER.

BY SIR HENRY THOMPSON.

For many years I have used the vulcanized india-rubber catheter for tying in the urethra and bladder, and have found it, as many others have done, extremely valuable from its perfect flexibility, and the consequent small liability to excite irritation which its presence produces. In most cases it is easily kept in place by a loop of soft twine, loosely tied round the penis, just behind the glans; but in a few instances this very quality of flexibility, which is so advantageous, permits the escape of the instrument from the canal, and difficulty is experienced in efficiently retaining it there. Hence Mr. Holt's suggestion of "wings" to the end of the instrument which lies within the bladder. Efficient as these may be when *in situ*, although they unquestionably sometimes occasion irritation, an instrument so furnished does by no means always pass easily, and usually causes more uneasiness, both in the act of passing and afterwards, than a catheter not furnished with such appendages.

The problem, then, is to efficiently maintain the soft vulcanized catheter in place without making additions of this kind. This I have accomplished, I believe completely and successfully, in the manner following: Into an ordinary vulcanized india-rubber catheter, say about the size of 8, 9, 10, or more, according to the requirements of the case, a thin German-silver tube, about four or five inches long, is introduced by the maker, so that the last six inches of the catheter remain as flexible as ever, also about two inches of the anterior part, to form a spout or conductor outwards for the urine. This being done, the calibre of the interior is still nearly uniform,—the thinness of the metal tube and the elasticity of the india-rubber being so accommodated to each other as to accomplish this object. This description has been practically realized for me by Messrs. Weiss, the well-known instrument makers. The instrument is furnished with a silk cord to fasten it, which, owing to the metal tube, cannot diminish the choke or diameter.

The advantages of this catheter are several:—

First, not only is it more difficult to pass, but less so than the original instrument without wings, since the metal tube affords a handle which almost invariably carries the flexible part beyond it easily into the bladder.

Secondly, when the loop of silk with which the catheter is provided is loosely tied behind the glans, it is next to impossible for the instrument to escape; the want of flexibility in the silvered part securing this. In special cases in which it is desired, the silver may be shortened to two or three inches with perfect security.

Lastly, since no appendage exists in that part of the catheter which is within the bladder, the liability to retain any phosphatic deposit is reduced to a minimum, and no special attention to remove such foreign matter is always necessary. In one instance I kept it in six weeks without the slightest incrustation occurring. It is, however, as a rule prudent to remove the catheter every few days to observe if any takes place, and this is a matter of no consequence, as no difficulty or pain arises from its reintroduction.—*Lancet*, February, 1871.

(This instrument is made by Messrs. Otto & Reynders, the instrument makers of New York.)

Editorial.

PHILADELPHIA DISPENSARY FOR SKIN DISEASES.

An incorporated institution bearing the name of "Dispensary for Skin Diseases," has been organized and opened in Philadelphia, for the purpose of giving gratuitous advice to those afflicted with this class of diseases. The great benefits to be derived from special Dispensaries are, first: Extraordinary facilities for treating special diseases; and, secondly, in securing the services of men of acknowledged skill and reputation in the special branch of science to which the institution is devoted. In placing the Dispensary under the professional care of Dr L. A. Duhring, they have secured the services of an accomplished Dermatologist and one who will reflect credit on the Institution.

ON THE PATHOLOGY OF ECZEMA.

To the Editor:

SIR: English authors owe you a deep debt of gratitude for so kindly defending them against the unjust attack made upon them by Dr. White, and I cannot help expressing my regret that the editor of the *Archiv für Dermatologie*, etc., should have thought fit, as he has done, to approve of such intemperate remarks.

As Dr. White states that Hebra published his views in 1859, I unhesitatingly withdraw all claim to priority. I certainly, however, was not aware of the fact, which I have never before seen noticed in any journal, English or Continental, otherwise I would never have dreamed of preferring such a claim; and Dr. White gives me credit for very little penetration, when he thinks that my "English conceit" would induce me to hazard any statement which I thought could by any possibility be overturned—much less one which might so easily be refuted.

I see that in the *Archiv* Dr. Foster Swift is coarsely (there is no other word for it) censured for supporting my claim to priority! I am afraid the writer of the article in question either does not understand English or has not read the original papers which he so rudely comments upon, otherwise he would not have committed such blunders. Dr. Swift never undertakes to support my claim; he simply mentions that I stated it. Whatever blame therefore may attach to me for being in error on this head, it is clear that he must be exonerated. But, sir, when I put forward this claim, I did so WITH A RESERVATION WHICH COULD NOT BE MISINTERPRETED. The words in the original paper (*Journal of Cutaneous Medicine*, vol. 3, p. 141) are quite clear on this point. "I speak" (it says there) "under correction. M. Hebra may have made known his views at an earlier period; I can only judge from dates I have been able to obtain access to."

I have the honor to remain, sir,
Yours very obediently,
J. L. MILTON,
Surgeon to St. John's Hospital for Diseases of the Skin.

LONDON, *Dec.* 24th, 1870.

We have given space for the insertion of the above letter as an act of justice to Mr. Milton. We regret it has been so long delayed, and would have preferred that more temperate language had been used in the discussion, which should have been purely of a scientific character.

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Foreign books for review may be addressed to the following agents of the Publisher, who will forward them immediately:

London.—Messrs. Williams & Norgate, 14 Henrietta Street, Covent Garden, W. C.

Paris.—M. G. Reinwald, 15 Rue des Sts. Pères.

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PLATE II.

Fig. 1.

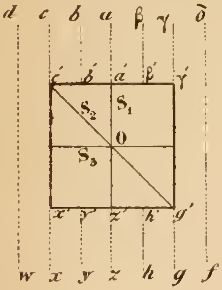


Fig. 2.

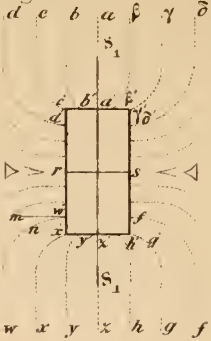


Fig. 3

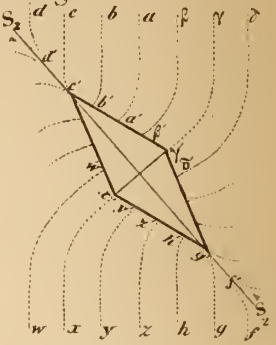


Fig. 4.

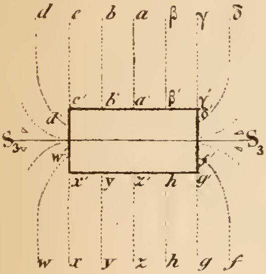


Fig. 5.

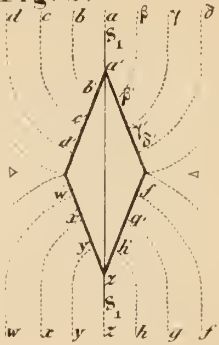


Fig. 6.

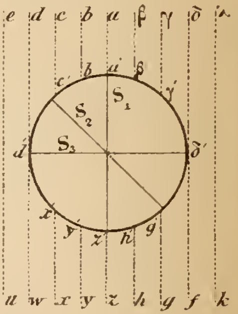


Fig. 7.

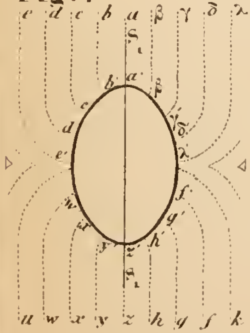


Fig. 8

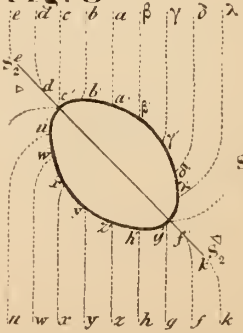
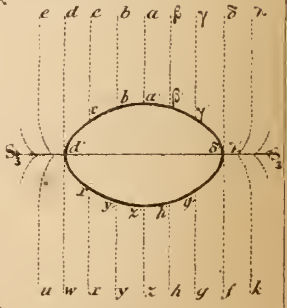


Fig. 9



Drawn and Engraved on Stone for the American Journal of Syphilography & Dermatology.

THE AMERICAN JOURNAL
OF
SYPHILOGRAPHY AND DERMATOLOGY.

JULY, 1871.

Original Communications.

CONTRIBUTIONS TO THE PHYSIOLOGY AND PATHOLOGY OF SCARS.

BY G. J. SWERCHESKY, M. D.,
Surgeon to the German-American Dispensary.

PART I.—THE LAWS OF CICATRIZATION.

THE aim of these investigations is the study of the mechanism of scars. The investigations previously undertaken on this subject have aimed only to clear up the morphological construction of scars, without heeding the study of their functions; whilst the latter are practically of extreme importance. For instance: how often does a scar, by its contraction, spoil the success of a plastic operation, as, viz., where the materials of which the surgeon forms the nose or lips are very scanty. How often do we meet with cases of frightful deformity from the contraction of scars after a burn? These two instances are sufficient to show how advantageous it would be for the patient if the surgeon were better acquainted with the capricious nature of the scar. But investigations like these have become possible only since the year 1861, when Prof. Langer published his work, "Zur Anatomie und Physiologie der Haut."[1] Doubtless his investigations will be of great use in plastic surgery, and will be introduced into surgical text-books. My own investigations were made in the physiological laboratory of my esteemed teacher, Prof. V. Tomsa, in Kieff, Russia, and under his direction. The plan which I adopted was that which formed the basis of Langer's investigations. First, I shall examine the mechanical action, and secondly the elasticity of the scar.

THE LAWS OF CICATRIZATION, CLEAVAGE—MUTUAL ACTION BETWEEN SCAR AND SKIN.

A puncture made in the skin by means of a conical-shaped awl assumes, in most cases, an elongated form. By making a good many of these clefts, it is very easy to demonstrate that the clefts in certain localities follow one direction, or, in other words, under similar circumstances, in a given place we can make by a prick of the awl a cleft of a certain direction. This property, depending upon the forces which act in the skin, is called cleavage. The cleft in the skin must be understood as the expression of several forces acting under an angle.

The motion performed by any limb causes the skin to stretch on the side opposite to that to which the limb is bent. This tension spreads over the tissue-bundles of the skin; but the bundles always crossing each other at more or less acute angles, the tension expresses itself by the corresponding diagonals. Consequently these diagonals or their objective expression-clefts indicate the direction in which the bundles of the skin are being displaced. The majority of the bundles follow the direction of the tension, or, at least, approach to it, and the more considerable the tension, the more bundles follow its direction and the less the opposite. In such a case, the clefts express approximately the direction of the bundles themselves.

Thus, the cleavage of the skin indicates most frequently the direction of the majority of its bundles or fibers. That it answers this purpose, Langer proved in the first place by his extensive investigations on the cleavage of the human skin, both by microscopical and macroscopical investigations.

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[1] (*Sitz. Ber. d. W. Kk. Ak.* XLIV. Band, 1861. 2 classe.)

It is important in every case to distinguish the distinct from the indistinct cleavage. In the district of the former, the punctures with the conical-shaped awl are represented in the form of narrow, smooth-bordered clefts, whilst in the district of the latter the clefts are wide, often lose even the shape of the cleft, and resemble more nearly holes with uneven, torn borders. The former is chiefly to be met in the movable parts of the skin, exposed to definite tensions; the latter where the skin is adherent to the underlying tissue so firmly as not to be displaced. It occurs on the joints and on bony protrusions. The indistinct cleavage is to be met also in those localities where the distinct cleavages meet each other at a certain angle, and the district of one invades the district of the other; the awl here makes triangular clefts. On the buttocks, scrotum, and female breasts of grown-up persons the cleavage is also indistinct, whilst the skin of the fœtus or the infant in these places has the distinct cleavage. It can be explained thus: that these organs, while increasing considerably in size with age, push out the skin, and the latter consequently stretches more and more, especially in a direction perpendicular to the bundles, which, deviating from each other, concur to the formation of the wider clefts.

The following experiments were performed on dogs. First, in order to be able to choose localities with cleavage as distinct as possible, I examined the cleavage of the entire skin of the dog. Such places in the dog can be found on the external sides of shoulder and thigh (Plate I, fig. 1 and 2). The clefts in these places are chiefly directed from above and before downwards and backwards. Nearer to the anterior borders of these parts they change their chief direction, bend round to the borders and pass inward. The punctures were made by means of a conical-shaped awl, 40 m.m. in length and 5 m.m. in diameter at the base. The awl was always held perpendicular to the surface of the skin. In cases where the bone was the tissue immediately underlying, the awl was introduced as far as the bone in a perpendicular direction, and afterwards was turned aside. To the trunk and limbs of the dog one position was constantly given, because the shape of clefts and excised wounds changes very often from the altered position of the animal.

The wounds were made in the definite direction to the cleavage of the locality of the skin under examination, *i. e.*, either in a perpendicular or parallel direction. Sometimes, however, it did not succeed, and the direction became oblique. The shapes and sizes of the wounds were as follows:

1. *Without loss of substance*, by means of a linear cut 60 or 80 m.m. long; 2. *With loss of substance* (*a*) *round*, were cut out by means of a hollow steel cylinder with sharpened edge (*Hohleisen*); the length of the diameter equaled 25 m.m.; (*b*) *rectangular:* these were of two sizes, 50 m.m. long by 20 m.m. wide and 84 m.m. long by 57 wide. The rectangular wounds were so disposed to the cleavage that their long sides were either parallel or perpendicular to it. In order to compare the modification of the shape of a scar at different ages, I arranged so that I had four scars of each shape at three ages, *i. e.*, three, two, and one month scars. Each dog, before the wounds were made, was narcotized by means of injections of the tinct. opii simpl. in the saphenous vein. Before the wounds were made, as well as before examination of the scars, the skin was shaved as clean as possible. The shape of the scars and the plan of modified cleavage were copied very carefully, the size of the scars having been noted also. In the linear scars the length was taken, in the rectangular, in both diagonals and all four sides, and in round, or, more correctly, oval, both diameters—the long and short. This portion of my work is founded on the investigation of 64 scars.

The parallel rows of clefts, while approaching the scar, are no more parallel, but converge. This appearance was repeated in all the 64 scars, without exception. To establish this more clearly, parallel lines were drawn with ink along the scars (Pl. I., fig. 3)—two on the borders, one in the middle between them; the same was done in the transverse direction. On these lines punctures were made. It is here seen that the prolongation of the clefts of the middle rows *a a'*, *d d'* nearest the scar are perpendicular to each other. The clefts of the rows *b b'*, *a a'*, *c c'*, are parallel at a distance from the scar, but not in its vicinity. The prolongations of the clefts of the row *b b'* with the clefts of the row *a a′*, and *a a′* with *c c′*, form the more acute angles at a distance from the scar, and the more obtuse in its vicinity. The same can be proved also as regards the other rows. In consequence of this convergence of the clefts, the cleavage of the skin round the scar has more or less a ray-like disposition. This fact can be easily explained by the contraction of the scar. Supposing the border of the wound is 50 m.m. in length, and is met by 50 equidistant rows of clefts, it will be easily understood that when the scar is contracting and the former border is reduced to 25 m.m., these 50 rows must approach each other, and whereas the distance between them was 1 m.m., it is now only 0.5 m.m.

It was mentioned above that the rectangular wounds were mostly made in such a way that the cleavage of the skin met two sides perpendicularly, and was parallel to two others. After cicatrization we found another disposition—the clefts converging to all sides. This fact depends on successive action of tension, and will be explained further on.

The triangular clefts may be found very often after cicatrization in those localities in which in the intact skin they do not exist at all. The conditions of their appearance are the same in both cases. They occur usually in those places where two distinct cleavages meet.

The modification of the shape of the wound by cicatrization and the diminution of the intervals between the clefts round its borders, causes the modification of the normal cleavage of the skin. On the border of the entrance of the modified cleavage into the unmodified, there is always to be found a greater or lesser number of irregular clefts.

As to the degree of modification of the normal cleavage, it depends altogether upon the degree of contraction of the scar. The greater its contraction, the greater is the district of the modified cleavage.

Rarely, although it sometimes exists, instead of irregular clefts, mixed cleavage on the border of the modified cleavage may be found with the normal, *i. e.*, the district of one cleavage invades the district of the other, and their clefts are perpendicular to each other.

Besides this, anomalies of the normal cleavage are met sometimes, especially on the posterior limbs.

The scar, just after cicatrization, consists of two distinct parts—exterior and interior. The latter is newer than the former, because the cicatrization begins from the borders of the wound. The difference between these parts consists in the following points: The interior part appears red, protruding above the surface of the skin, and smooth; whilst the exterior part is pale, sunken, and wrinkled. The interior part presents far less resistance to a puncture than the exterior. More distinct differences can be shown by the microscope, viz.: the interior or younger part consists of young connective tissue cells and homogeneous interstitial substance; and the exterior or older part of fibers between which there are disposed fusiform bodies. On the borders between the parts may be found places where the formless interstitial tissue of the young part begins to be transformed into fibers. This change is performed sooner on the surface of the scar than in the depth. Therefore, the space occupied by the young part is less on the level of the epidermis than deeper; the older part will, of course, show the inverse relation. The epidermis covering the scar is more strongly joined to the old part than to the young. Therefore it does not follow the displacement of the tissue of the young scar, produced by the prick of the awl, prevents in this way any examination of the cleavage, and must be previously removed. The three-months' scars, in most cases, do not present the distinct division into two parts. By considering all this we can clearly distinguish old from young scars, as the former present, without exception, a uniform pale tissue, whilst the latter always consist of two parts.

The cleavage of old scars coincides with the direction of the normal tension of the skin (Pl. I., figs. 5, 7, 8, 9). *Young scars present quite another relation: their cleavage is radiate* (Pl. I., fig. 4). In young scars the rows of the clefts radiate from the middle to the periphery and join the rows of the clefts of the skin, which, as mentioned above, always converge radiately to the scars. When the scar grows older, the clefts beginning from the borders which intersect the dominant cleavage, change the radiate disposition to that proper to the old scar (Pl. I., fig. 6).

This radiation originates, sometimes, as from one point, or from some clefts, disposed without any evident plan, or from one row of the clefts disposed in the rectilinear direction. Finally, cases may be met where cleavage is the same in both parts of the scar as it is in the old scars.

Occasionally, on the borders of the young and old parts of the scar, the clefts show in their depth a different disposition from their surface. This is easily explained when we consider that the young part of the scar spreads more in depth and the old on the surface, the young part having approximatively the shape of a bisected cone or pyramid. Thus the perpendicular puncture may, in certain positions of the scar, meet both old and young parts, and the result of it is duality of the cleft.

The scars of a dog which died from great exhaustion one hundred and eight days after the wounds were made, did not cicatrize entirely. In the internal parts of the three scars granulations were still to be seen. Under the granulations there was the young scar-tissue in which clefts could be made. The direction of these clefts did not show any regularity at all, and was in no constant relation either to the clefts of the scar or to those of the skin. I had afterwards several opportunities of examining scars covered with granulations, and always found the same relation, *i. e.*, there is no regular law in the disposition of the clefts until they are covered with epidermis.

The shape of the scar after cicatrization was always different from the form which was given to the wound. Therefore, in order to judge of influences which change the shape of a scar, it is necessary to become acquainted with the influences which change the shape of a wound.

When a round piece of the skin is cut out, the wound will lengthen into an ellipse, the long axis of which will coincide with the direction of the greatest tension. I repeated such experiments in the places where I had made the wounds for scars. The dead dog is laid aside; the extremities are brought into the position which is usually taken by the dog without any muscular action, *i. e.*, half bent; the wounds are made by the hollow steel cylinder mentioned before. In different positions of the limbs, the forms of the wounds changed in the following manner:

1. The limbs are straightened, and their longitudinal axes form right angles with the axis of the trunk.

On the anterior limb the long axis of the ellipse is turned forward and downward (Pl. I., fig. 1–*a b*).

On the posterior limb the long axis is turned backward and downward (Pl. I., fig. 2–*a b*).

2. The limbs are straightened, and their longitudinal axes are inclined to the axis of the trunk in such a way that their acute angles look forward.

On the anterior and posterior extremity the long axes of the ellipse coincide with the longitudinal axes of the limbs.

3. The limbs are straightened, and their axes are inclined to the axis of the trunk in such a manner that obtuse angles look forward.

On the anterior extremity the long axis of the ellipse is turned forward and downward.

On the posterior—backward and downward.

4. All the joints of the limbs are bent.

On the anterior limb the long axis of the ellipsis is turned backward and downward (Pl. I., fig. 1–*c d*).

On the posterior limb—backward and downward (Pl. I., fig. 2–*c d*).

The cleavage coincides only in a few of these positions with the direction of the dominant tension.

The scars resulting from round wounds always retained an elliptical shape (Pl. I., figs. 7 and 8). The direction of their long axes was as follows: on the anterior limbs, from above and before, downward and backward; on the posterior, from above and behind, downward and forward. In twelve elliptical scars there was no exception to this rule. Consequently, the shape and direction of the long axes of the elliptical scars are identical with the shape and direction of the round wounds when the limbs are bent, *i. e.*, when the position of the limbs is what has been described as the 4th. On the other hand, I remarked that dogs, having wounded limbs, keep them always in the bent position. We know, too, that the change of the round wounds into the elliptical is the expression of the tension, which exists in a given moment in the skin. Considering all this, we may conclude that *the shape of the scar depends entirely upon the tension which exists in the given district of the skin.* In the bent position of the limbs, tension existing in the given locality is expressed by the above-mentioned direction of the long axes of the ellipses, and if wounds heal in this direction, scars must receive the form which depends upon it. The cleavage of the skin meets the long axis of the ellipsis on the anterior limb at an acute and on the posterior limb at a right angle.

The influence of the tension manifests itself very evidently in the scars which result *from rectangular wounds*, when the tension coincides with the diagonal (Pl. I., fig. 5). In that case, the scar lengthens in the direction of this diagonal and takes the shape of a parallelogram. But when the tension is parallel to the two sides of the rectangle, the scar lengthens in this direction and narrows in the opposite (Pl. I., fig. 4).

By combining the data thus obtained it is easy to explain the mutual action between scar and skin, *i. e.*, the *synthesis of cicatrization.*

Fig. 1, Pl. II., represents a square wound at the time of being made, and its relations to the cleavage of the skin (which is indicated by the dotted lines), and to the possible secondary tensions indicated by the lines S_1, S_2, S_3. *By secondary tension* we must understand that originated by the flexion of the limbs or generally from the position taken by the dog involuntarily for the relief of pain after the operation. (Pl. I., figs. 1 and 2, dotted lines *c d.*)

The secondary tension acting in the direction S_1, figure 1, will change into the figure 2, Pl. II., *i. e.*, the square will lengthen in the direction of the secondary tension, and will narrow in the opposite direction, consequently is transformed into a rectangle. The row of the clefts *a z* will not change its direction; the rows *b y*, *c x*, *β h*, *γ g* will change their rectilinear into a curved direction, the distances between the separate rows of the clefts will narrow towards the scar.

Two sides of the square wound remaining parallel to the cleavage, but the secondary tension following the direction of the diagonal S_2 (fig. 1), the square will be transformed into a rhomboid wound (fig. 3, Pl. II.). The rows of the clefts *c c'*, *b b'*, *a a'*,

$\beta\,\beta'$, $\gamma\,\gamma'$, which were perpendicular to the side of the square, on account of change of its direction, will change also their directions, and from rectilinear will become curved rows.

The lateral rows of the clefts $d\,w$ and $\delta\,f$ (fig. 1), corresponding to the modification of the shape of the scar, must also change their rectilinear into a more or less curved direction, viz.: in such a way, that at the first moment of action of the secondary tension, their convexity will be turned toward the long sides of the rectangle. On the other hand, the scar, continually contracting, increases the tension on the sides, which becomes greater than normal; we know, too, that the direction of the clefts is the resultant of all the tensions which exist in the given locality of the skin, and, as usually one tension overpowers all others, so the direction of the clefts will coincide with this tension, or, at least, will approach it. It is clear now that the rows of the clefts $d\,w$ and $\delta\,f$ must change their direction on account of the contraction of the scar. The secondary tension and the tension perpendicular to it, which depends upon the successive contractions of the scar, and which henceforth I shall call *lateral*, present two forces, acting under an angle; then their resultant, which follows the direction of the diagonal, will itself express the direction of the clefts. The secondary tension S_1 (fig. 2), meeting a scar in its way, is separated by it, as if into two forces, acting on its short sides. These forces being equal, and the obstacles presented by the scar being equal too, each of these forces will act on the nearest half of the scar, and a line $r\,s$ will be the boundary border between the district of the action of each force. Therefore, in the lower part of the scar, on a certain point w', secondary tension will act by the line $w'\,x'$ and lateral by the line $w'\,m$; the resultant, or, better, the row of the clefts will follow the direction $w'\,n$. Similarly in the upper part of the scar, it is evident that the row of the clefts $d\,w$, $\delta\,f$, ought to meet $c'\,a'$ and $g'\,g'$. Moreover, that the row $d\,w$ dividing into $d\,d'$ and $w\,w'$, the row $d\,f$ must be divided in the same way. By recapitulating in this way, it is easy to prove that other lateral rows must be identically modified.

The increased lateral tension acts on the sides $c'\,x'$ *and* $\gamma\,g$ (fig. 2) *and strongly on the points* r *and* s, *because on the extreme points of both sides it is counterbalanced to a greater degree by the sec-*

ondary tension than on the internal. From such a disposition of the tension in the scar the lateral rows of the clefts meet the long sides of the rectangle under the different angles; the nearer these angles are to the extreme points, the more acute are they.

The disposition of the clefts in fig. 5 is entirely analogous to that of fig. 2.

The cleavage of fig. 3 is a little different because the secondary tension and normal cleavage are not parallel. The lateral row *d w* (fig. 1) divides into two: *d d′* and *w w′* (fig. 3); *d d′* is situated in the district of indistinct cleavage and triangular clefts, and *w w′* meets *c′ x′* under the angle. The explanation is the same as for the preceding figure, *i. e.*, the modification of the lateral rows of clefts depends principally upon the influence of the lateral tension, which is strongest at the points *x′* and *j′*, and its action diminishes on the points *c′* and *g′* from the cause above explained.

Fig. 4 can be reduced to fig. 2 by supposing that the lateral tension acts in the latter in the direction *s s* and the secondary in the direction *r s*.

Figures 7, 8, and 9, represent the modifications of the shape of the round scar (fig. 6), and of the surrounding cleavage of the skin. These modifications are quite analogous to the modifications of the square scar.

Therefore the modification of the cleavage round the scar, in the beginning, depends upon the action of the secondary lateral tension upon each other. But the animal beginning to use its wounded limbs, and therefore the *normal tension* being exercised, the latter (normal tension) may or may not change the existing cleavage. The cleavage round the scar does not change at all, or changes very little, when the normal tension of the skin coincides with the secondary or lateral tension. This slight modification, if it exists, will be in direct ratio to the degree of the normal tension. The secondary or lateral tension not coinciding with the normal, the cleavage will be in this case the result of all three tensions, and will, of course, be modified in proportion to their intensities.

The greater part of the figures of the quadrangular scars which I obtained, can be reduced to the figures 3 and 4, Pl. II., less frequently to figures 2 and 5, Pl. II. It can be easily explained when we remember that we endeavored, in the majority of cases, to cut out quadrangular pieces of the skin, so that two sides were parallel to the cleavage, and two others at right angles to it. Fig. 3 was met with on the anterior limbs, and 4 on the posterior. The oval scars could be reduced to figures 8 and 9. The former were met with on the anterior and the latter on the posterior limbs.

It is rather difficult to explain the radiation of the cleavage of the young scars, because the cleft here does not correspond to the above-mentioned explanation of it. Thus, it has been said that the necessary condition for the existence of the cleft is the existence of the fibers, or bundles, and of tension; but in the young scar the latter only exists. In similar cases, where there are no sufficient data to explain the fact, we may have recourse to suppositions and explain this case as follows: the young scar must very easily yield to the tensions existing in the skin, because its elasticity is so insignificant that it can have no reciprocal influence upon the skin. The tension of the skin around the young scar is entirely uniform, because the skin, after the making of the wound, contracting most in the direction of the greatest tension and less in the direction of the least tension, equalizes the forces which modify the shape of the wound through the whole extent of its borders. If, for instance, we have a round wound and it is filled by a young scar, the tension is to be expressed by the rows of the clefts, which unite peripheral points of the circumference with the center, *i. e.*, by the radii. If so, then the tissue must solidify in the direction of these radii, and in this same direction the clefts must be disposed. The existence of such relation between tension and the direction of the clefts can be made evident by the following proof: the first cleavage of the fœtus is circular, because the muscles and viscera at the commencement of its growth enlarge chiefly in the transverse direction, and, from the same cause, stretch the skin above them more transversely than longitudinally. But we know, also, that the skin in the fœtal condition resembles thick jelly (so also does the young scar), consisting of cells and intercellular tissue, which changes afterwards into fibers and bundles. Then, from all these data, one may conclude that *the radiate* *cleavage of the young scar is solely the result of the equality of tension on its borders.*

The conditions are changed, when, after recovery, the dog freely uses its limbs. From the lengthening of the scar in the direction of the secondary tension, the normal tension is increased by the straightening of the limbs, both tensions not acting in the same direction. The form of the scar does not change, for its elasticity is already considerably greater than that of the skin, but the direction of its clefts changes in such a way that *they follow the direction of the normal tension and unite the rows of clefts of the chief cleavage of the skin, which were separated by the making of the wound.* Figures 7 and 8 of Pl. I. represent the direction of the clefts of a three-months' scar, which runs forward and downward on the anterior, and backward and downward on the posterior limbs. These directions coincide entirely with those in which the wound lengthens when the limbs are straightened, *i. e.*, with the direction of the normal tension of the skin.

Apparently, between the action of the point of radiation and of the scar upon the cleavage of the skin around the scar, there exists a certain analogy. From both the rows of clefts pass similar radii from the center. They differ in this point, that the action of the scar is active, at least in the beginning of its existence, and that of the point of radiation is altogether passive. The continual contraction of the scar creates round itself the continual force of tension, which, in its turn, has a decisive influence upon the direction of the clefts; whilst the ray-like disposition of the clefts round the point of radiation depends upon the tensions, resulting from the growing of the limb in length and motions in the nearest joints. In time, when the scar becomes old and does not contract more, there is established between the action upon the skin of the scar and the point of radiation the most complete analogy.

I shall make a few remarks upon *linear scars*, *i. e.*, scars originating from a simple cut, without loss of substance. Their form, and the amount of filling up with scar-tissue, depend upon the direction of the cut. The cut is filled with a less quantity of scar-tissue when it is made parallel to the normal tension than when it is made in the perpendicular direction. Besides this, the shape as well as the size, cuts and tensions being equal, depends upon the animal's changing the position of the wounded part as long as pain exists. The scar and skin cleavage undergo the same modifications as in the cases of scars with loss of substance.

So, we may express the mechanical process of cicatrization in the following way: after the wound is made, the animal, in order to relieve pain, takes the most comfortable position, and thus changes the normal tension. To this is due the shape of the wound and scar; the intensity of the tension on the borders of the wound being diminished by discontinuation of the parts, the cleavage of the young scar takes the radiate disposition. The subsequent contraction of the scar causes increase of the tension, and, consequently, the modification of the skin around the scar. At length the animal recovers perfectly, uses the healed parts, and the previous normal tension resumes its power. This is due to the final cleavage of the scar, and sometimes of the surrounding skin.

EXPLANATION OF FIGURES.

PLATE I.—*Figures taken from the Dog.*

Figs. 1 and 2. Normal cleavage. The lines *a b* represent the normal tension of the skin; the lines *c d* the secondary.

Fig. 3 shows the convergence of the clefts toward the scar. The wound was rectangular and the long sides parallel to the direction of the clefts. The age of the scar, 131 days.

Fig. 4. The scar originated from a rectangular wound. The long sides crossed the direction of the clefts somewhat obliquely, but were at the same time parallel to the direction of the secondary tension. Age, 60 days.

Fig. 5. Scar from a rectangular wound. The long sides crossed obliquely the direction of the clefts. The long diagonal coincides with the direction of the secondary tension. Age, 84 days.

Fig. 6. Scar from a rectangular wound. The long sides crossed the direction of the clefts perpendicularly and were parallel to the secondary tension. Age, 96 days.

Figs. 7 and 9. Scars from round wounds. Age, 93 days.

Fig. 9. Scar from a linear cut, which crossed perpendicularly the direction of the clefts. Age, 94 days.

Plate II.—*Schemes.*

Fig. 1. Square wound. Its position with reference to the cleavage (dotted lines), and to the possible secondary tensions (lines S_1, S_2, and S_3). This form may be modified under certain conditions into the following:

Fig. 2. S_1 is parallel to the direction of the clefts, all other circumstances being equal. Fig. 4, Pl. I., corresponds to this figure.

Fig. 3. S_2 intersects obliquely the direction of the clefts, all other circumstances being equal, corresponds to Fig. 5, Pl. I.

Fig. 4. S_3 is perpendicular to the direction of the clefts, all other circumstances being equal, corresponds to Fig. 6, Pl. I.

Fig. 5. S_1 is parallel to the direction of the clefts. The square (Fig. 1) is turned by 45° round the point O. The row of the clefts ($a z$) does not meet the sides of the quadrangle, but its angles.

Fig. 6. A round wound. The cleavage is designated by the dotted lines. S_1, S_2, S_3 indicate the secondary tensions. This form may be modified in:

Fig. 7. S_1 is parallel to the direction of the clefts.

Fig. 8. S_2 crosses the direction of the clefts obliquely; corresponds to the Fig. 7, Pl. I.

Fig. 9. S_3 is perpendicular to the direction of the clefts; corresponds to the Fig. 8, Pl. I.

ON SYPHILITIC EPILEPSY.

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At the present time physicians group together under the general name of epilepsy, conditions as widely unlike as the imperceptible nervous changes induced by the unfelt irritation of a slight peripheral lesion and the grave disorganization produced by a tumor of the brain. With the advance of pathological knowledge we shall doubtless see this nomenclature disappear, and have in its place one more consonant with the present state of our knowledge of the physiology of the nervous system. The symptoms embraced under this name are as discordant as the pathological conditions which produce them. The merest sense of vertigo is as truly epileptic as the most completely developed paroxysm; and between these two extremes the disease presents almost numberless varieties. Dr. Russell Reynolds insists that the essential elements of the disease are loss or trouble of consciousness and excess of muscular contraction—that the former may be the only one apparent, the latter being limited to over-exertion of the muscular walls of the cerebral vessels.

It is a matter of common observation that symptoms of this nature are developed during the course of many different diseases. The convulsions of infancy, the eclampsia of parturient women, and the spasms and unconsciousness attending the progress of cerebral diseases, are cases in point. The phenomena of epilepsy may in fact be part of the natural history of any or all of the diseases coming within the province of obstetricians, surgeons, or physicians, and to this circumstance is due the many different interpretations placed upon this affection accordingly as it is viewed from one or the other of these stand-points. It is more than probable that undue stress is unconsciously placed upon circumstances which have no other relation to the disease than being familiar facts in the particular province of physicians engaged in special practice. One who has much to do with cases of epilepsy cannot but be forcibly reminded of this by the statements of patients or their friends as to the various opinions received from different physicians as to the cause of the disease in a given case. In no class of cases is this fact more apparent than in those where syphilitic infection either really exists or is supposed to exist. Patients who have ever exposed themselves to venereal disease, as well as those who have contracted gonorrhœa, or ulcers upon the genitals, are quite as apt to have their attention drawn to this mode of developing convulsions, and be classed as cases of syphilitic epilepsy, as those who give a connected and unmistakable history of constitutional infection.

In the causation of epilepsy, as of other forms of nervous disease, we have the important factor of hereditary predisposition. In his remarks on the theory of epilepsy, Dr. Sieveking says:

> "If we apply a lighted taper to a muslin curtain, the boarding of a wooden hut, or solid masonry of a church, the effect will vary with the greater or less inflammability of the different structures. The muslin curtain will speedily take fire and flare away; the planks may be scorched, but will probably not inflame; while the stones will show no traces of the influence of the destructive agent which the first shower will not wash away. In the first two instances there is a possibility of ignition; in the third it is not possible. Mankind vary similarly in their tendency to nervous disorders generally and to epilepsy especially; some are utterly insusceptible to influences that may produce them; others, like the wood and the muslin, are more or less impressionable. But wherever the disease occurs it is essentially the same disease; the same symptoms characterize it; it follows the same course, and, unless checked, leads ultimately to the same results."

A more comprehensive statement of the case than these few lines convey, could not be obtained. No one becomes epileptic because he or she is a man or a woman, and has arrived at a certain age, however potent age and sex may be in the causation of this complaint. Such circumstances merely concur to aid a predisposition already inherited. In like manner, injuries of the head, nervous exhaustion however induced, diathetic diseases, and reflected irritations, are, in and of themselves, incompetent to produce epilepsy. Nevertheless, they are all-important factors in determining the advent of attacks in persons so predisposed.

I have here grouped together several cases of epilepsy which agree in but one particular: that of acknowledging for their exciting cause the influence of constitutional syphilis. I have rejected many cases in which, while the effects of treatment would incline one to imagine the influence of specific taint, the history was void of those evidences of constitutional infection, such as are related by the patients whose cases I have inserted here. In the same manner, and for a similar reason, no cases have been deemed truly syphilitic from the mere circumstance that the patient had a venereal sore upon his penis at some preceding time. Nothing but a clear and connected account of a primary lesion, and constitutional symptoms, succeeded by the development of epileptiform convulsions, has been deemed sufficient to justify the classification of any case under the head of syphilitic epilepsy.

CASE I.—In 1868 this patient contracted the initial lesion of syphilis in Philadelphia, and presented the usual symptoms of constitutional infection —cutaneous eruption and falling of the hair—during the summer of that year. In October, nocturnal pains and nodes on the tibiæ made their appearance, for the relief of which he underwent mercurial treatment. In the Spring of 1869, without any premonitory symptoms, he had a number of epileptiform convulsions in rapid succession; since that time he has been subject to fits which make their appearance about once a week. In August, 1869, moved to New York. January 21, 1870, came under my treatment. At that time there were no evidences of syphilis, and the patient complained of no other symptoms indicating disorder of the nervous system than the weekly recurrence of the convulsions. The ophthalmoscope revealed retinal congestion. The treatment adopted was large doses of the bromide of potassium (15 grains three times a-day, dissolved in a wine-glassful of water); the effects of the drug upon the cerebral circulation being carefully watched with the ophthalmoscope. The fits disappeared for an interval of nearly three months. During the latter part of March, nocturnal pains again appeared; in April, the epileptiform convulsions returned, increased in number and altered in character: the loss of consciousness was not so complete as formerly, and occasionally would be but little affected during a paroxysm. The paroxysms were now exclusively nocturnal, and he would at times have as many as a dozen fits in rapid succession. The bromide was suspended for a few days, and the iodide in 20-grain doses, three times a-day, substituted. At the end of a week they were given conjointly, and so continued for a month. Subsequently, the iodide was administered alone, in doses of 10 grains twice a-day. The last fit occurred about April 25, 1870. At the present time (February 20, 1871), this patient reports that he has had no further trouble.

This patient resolutely denied ever having contracted syphilis until many weeks after the treatment directed against the convulsive disorder had been instituted. The account he then gave was so clear and explicit as to leave no doubt of his having had the disease. Prior to the use of the bromide he had been taking the iodide of potassium, for the purpose, as he expressed it, of curing the rheumatic pains from which he suffered. I was unacquainted with these circumstances until he requested permission to resume the iodide, when, upon questioning closely, he told the whole story. During the latter part of March he was absent from the city for a number of days; no anti-syphilitic remedies were employed until after the convulsions returned in April, when the iodide of potassium was used in the manner above described. When last seen in February, 1871, this patient not only reported that he had been free from the fits, but that his general health was much better than it had been for years.

It is difficult to form a proper estimate of the causes which operated to produce the convulsive seizures of April, 1870. The nature and frequency of the attacks, as well as the time of their occurrence, would seem to indicate that they were at least partially due to the excessive use of the bromide; while the simultaneous occurrence of the peculiar pains of syphilis, after a long interval of freedom, shows that at that particular time the specific poison was again becoming active. This patient was also absent from town for a considerable period prior to their recurrence, and my notes of the ophthalmoscopic appearances are defective at the very time when their evidence would be of service.

Case II.—A gentleman, 35 years of age, presented himself in August, 1870, suffering from epileptic paroxysms occurring weekly. The attacks presented no unusual character, and there were no other symptoms referable to the nervous system. His father died of paralysis at the age of 58. During the year 1867 contracted venereal disease in New Orleans, and was treated by a prominent surgeon of that city. Constitutional symptoms came on in two or three months, but were promptly dissipated by treatment. In 1868, nodes came on the shin-bones, and he suffered from nocturnal pains. The iodide of potassium relieved these symptoms, and no further trouble was experienced until July, 1869, when the first epileptic fit came on. His business (that of a commercial traveler) rendering it impossible for him to remain long in one place, he was under no regular treatment for nearly a year. During this time the attacks were exclusively diurnal, and recurred at irregular intervals of from one to two weeks. When I first saw him in August, 1870, there were a number of swellings on the tibiæ, the remains of former periostitis. A small but exceedingly painful node occupied the left mastoid process, and he complained of nocturnal pains in the region of the left supra-orbital nerve. He was still taking the iodide of potassium in doses of 5 grains twice a-day. He was directed to increase the iodide until 20 grains three times a-day were taken, and to take in addition the bromide in doses of 15 grains before each meal. This latter remedy was only continued a month, but the iodide is still being used. No convulsions since September, 1870.

In this case the syphilitic history was equally clear with the preceding one, and the subsidence of the convulsive phenomena directly due to the specific treatment. The bromide may have relieved any temporary condition of cerebral irritation, but it was doubtless due to the iodide that the patient was freed from his epileptiform symptoms. From the very commencement of the administration of the large doses of the latter remedy (of which smaller quantities had been given for a long time without any beneficial result), the nocturnal pains disappeared, the swelling on the mastoid process subsided, and the fits failed to return. It was the evident connection of the specific symptoms with the convulsions that induced me to stop the bromide at such an early date, and trust to the anti-syphilitic treatment alone. The result has fully justified the action. In January, 1871, this patient exhibited no symptoms of syphilis. He was still taking scruple doses of the iodide.

Case III.—A laboring man, residing in Jersey City, presented himself at the Out-Door Department of Bellevue Hospital, suffering from partial paralysis of the right leg. This was in March, 1870. He was 39 years of age, and stated that when 25 years of age he contracted a venereal sore, which, within a few months, was followed by a pustular cutaneous eruption, sore throat, and inflammation of the eyes. For these complaints he was under treatment fully a year, but was finally discharged, cured, as he imagined. The next difficulty he experienced was a very unsightly swelling of the nose, with a profuse discharge of offensive pus, severe nocturnal pains, and almost complete deafness. This was three years after the primary sore. The physician who treated him for these last symptoms prescribed large doses of the iodide of potassium, with the effect of greatly relieving him. In the year 1860 he came to the United States, and was free from all evidence of the disease, except slight deafness, for four years. In the latter part of 1862, while serving as an army teamster, he observed that the ear most affected was the seat of a peculiar and unusual sensation. Without any premonitions, he would suddenly hear a buzzing noise in that ear (the right one), with a sensation of burning, affecting the whole organ, and a tickling, tingling feeling deep in the meatus. In the beginning, these attacks were so slight as to scarcely attract his attention. As time elapsed, however, they became much more severe. Instead of the subjective noises, with itching and tingling, these attacks manifested themselves by a sudden, loud report in that ear, with momentary vertigo, followed by a great desire to rub that side of his head. The number of these attacks increased, and some were much more severe than others. In some he became dizzy and blind, but still retained consciousness sufficiently to be acutely sensible of the disagreeable feelings in his ear; while in others he could remember nothing beyond the sudden loud report which always preceded an attack—for the ensuing moment he would be unconscious. He still retained his team and attended to his ordinary business until July, 1864, when, after one of these ear-attacks, he had a fully-developed epileptic fit. During this month nocturnal pains also made their appearance, and caused him so much trouble that he resigned his employment, came to New York, and underwent specific treatment. He had about fifteen fits in all, extending over a period of two months. They were always preceded by the peculiar ear-symptoms above described. Treatment promptly dissipated the convulsions, nocturnal pains, and ear-troubles.

The partial paralysis of the right leg was relieved by large doses of the iodide of potassium (20 grains, three times a-day) conjoined with hypodermic injections of strychnia.

Although the epileptiform symptoms in this case were developed six years ago, and the whole number of attacks was very small, yet I have related the history at some length, owing to the exceptionally clear account given of the manner in which the aura was developed, and the evident relationship between it, the milder forms of the disease which occurred early, the fully developed paroxysm which occurred later, and those evidences of constitutional infection which were present at all times.

Case IV.—A railroad conductor, aged 43, contracted constitutional syphilis in 1864. During the Winter of 1866–7 was troubled with painful swellings of the clavicle and bones of the head, with diffused pains in his limbs, worse at night, for the relief of which he took the iodide of potassium. In December, 1869, had an attack of acute mania, succeeded by external strabismus and slight facial paralysis. His wife remembers that for several months previous to this he had been troubled with fits of dizziness and momentary absence of mind, recurring several times a-day. In March, 1870, epileptic attacks, nocturnal in character, made their appearance; returning at intervals of from four to six weeks, accompanied by daily attacks of the *petit mal.* During the Summer he gradually lost power in the lower extremities, and suffered from boring pains in the spine. In November, 1870, was exposed for a length of time to severe cold, and from that time his symptoms increased so much in severity that he was compelled to take to his bed early in December. The epileptic attacks now became diurnal in character, and recurred several times a-day. He emaciated rapidly, and suffered much from insomnia and depression of spirits. Acute atrophy of the pronator and flexor muscles of both forearms also made its appearance, and progressed with great rapidity. On the occasion when I first saw this patient, January 1, 1871, he was almost imbecile; had paralysis of the left side of the face, and of the muscles supplied by the left third cranial nerve; anæsthesia of the forearms and legs, and atrophy of the thenar eminences of both hands and the pronators and flexors of both forearms. The fits were recurring twice a-day. The ophthalmoscope revealed intense congestion of the retinal vessels, but no organic changes in the papillæ. Bed-sores had formed on both hips, and the left ankle was the seat of a syphilitic ulcer of long duration. Three large and very painful nodes were discovered on the occipital bone, while clavicles and tibiæ exhibited evidences of old periostitis. This patient was placed upon 10-grain doses of the iodide of potassium, three times a-day. These were persisted in for about a week, and then it was so arranged that the dose could be increased one grain daily. The bromide, in doses of thirty grains, was also administered each evening. These, in connection with sustaining diet and a proper bed, were all the remedial measures adopted. By the end of January, the dose of the iodide having increased to 30 grains, it was kept at that quantity, and at the present time (February 23) is still being administered.

This patient is still under observation. Since the commencement of treatment, the epileptiform symptoms have disappeared, the mental powers have improved, and the patient so far relieved as to be able to leave his bed. The case is noteworthy as regards the prompt relief of the former. But little efficacy is, I think, to be ascribed to the bromide, for equally good results would doubtless have been obtained from the employment of sufficiently large doses of the iodide alone. It is also to be remembered that, owing to the recent date at which the epileptiform symptoms were developed, a sufficient length of time had not elapsed to allow the system to acquire the epileptic habit.

CASE V.—In the case of J. C., aged 37, syphilis was contracted in 1853, and proved more or less troublesome for two years. During this time all the symptoms were characteristic of constitutional infection, and he was relieved by specific treatment. In June, 1855, had his first epileptic fit. The paroxysms returned again in 1856, and gradually became more frequent. He was a soldier during the Rebellion, and although his fits came on about once a month, he found no difficulty in performing all his duties. In December, 1869, when I first saw him, the fits were manifesting themselves two or three times a-week, and recurred indifferently by day or night. At this time he was also suffering from necrosis of the right tibia. The ophthalmoscopic appearances indicated hyperæmia of the disk and retina. There were traces of old iritis in the left eye.

I have already called attention to this case in an article which appeared in the *New York Medical Journal* for February, 1871, as an illustration of the value of the ophthalmoscope in the treatment of cases of epilepsy. This was clearly shown in the treatment of this patient. As is above stated, the ophthalmoscopic appearances indicated cerebral hyperæmia, and in pursuance of the plan I commonly adopt in cases exhibiting these appearances, I prescribed the bromide of potassium in doses of 15 grains, three times a-day, and directed the patient to report twice a-week for examination. In neither of these respects were my directions complied with. He passed from under my observation for nearly three weeks, and when he came back, it was to report a return of the convulsions. Instead of taking a teaspoonful of the solution ordered (equivalent to 15 grains of the drug), he took twice and thrice that quantity. As a consequence, the paroxysms at once ceased with the relief of the cerebral hyperæmia, but when the physiological effect of the remedy was carried too far, an anæmic condition was induced, and from this widely opposite anatomical condition the paroxysms returned with greater violence than ever. This case also illustrates the fact that success in the treatment of epilepsy depends much less upon the particular drug prescribed than upon the care and skill employed in regulating the administration of the remedy selected. In the present case, the presence of this anæmic condition was plainly evident from an examination with the ophthalmoscope. To remedy it, a drug was employed which experience has demonstrated to possess the power of increasing the amount of blood circulating through the cerebral blood-vessels—the sulphate of strychnia. This was administered in the form of a solution (2 grains to an ounce of water), in doses of ten drops, three times a-day; and very soon after its administration was commenced, the convulsions again disappeared. The patient was carefully watched from that time forward, and the bromide of potassium or sulphate of strychnia were used just as they were indicated by the varying condition of the blood-supply of the brain. His last fit occurred in January, 1870.

In the above case we have an illustration of the fact that epilepsy, primarily developed by syphilis, may continue and grow worse from the influence of habit alone. It is true that this patient was suffering from necrosis at the time he came under my observation, and it is probable that the specific taint may have been instrumental in its development; yet the fact that the epilepsy was so affected by remedies, none of which were anti-syphilitic, as to produce a suspension of the paroxysms for fifteen months, is strong evidence that no active influence was exerted by the syphilitic poison. Had the latter been present in an active form, no such results could have been obtained by the treatment adopted.

Case VI.—R. O'G., a laborer, native of Ireland, aged 43 years, contracted syphilis in August, 1870, and had a copper-colored eruption, alopecia, sore throat, and double vision within ten weeks. Subsequently he suffered from nocturnal pains in his limbs and nodes on the tibiæ. In December, 1870, after a brief attack of localized pain in the head, had a convulsive seizure. These fits recurred at the rate of eight or ten a-week. In the intervals between paroxysms complained of double vision and vertigo. Came under treatment January 9, 1871. Was ordered—

℞.—Hydrargyri Bichloridi . . .	grs. j.
Potassii Iodidi	℥ ss.
Aquæ ad.	℥ iv.
M.	

Dose, a teaspoonful in a wine-glass of water after each meal. At the same time he was to live generously, and take plenty of out-door exercise. When this patient was last seen he was still taking the above prescription. He reported that no fit had occurred since treatment was commenced, and that the vertigo and diplopia had completely disappeared. Still under observation.

In the preceding cases the interval between the contraction of the primary sore and the supervention of the convulsions varied from five months to eight years. In other examples of syphilitic epilepsy which have come under my observation the discrepancy is equally great. It is probable that the particular time at which, in given cases, epileptiform symptoms are developed is explicable only upon the same hypothesis which it is necessary to resort to in order to account for the development of epilepsy in some, and not in all, cases of syphilis. The "unknown element" which we have to postulate is the variable factor of hereditary predisposition; and the only explanation we can obtain is that in proportion to the strength of the predisposition the patient will have the convulsions occurring early in the course of the syphilitic disease. In other words, the stronger and more efficient the predisposition, the slighter will be the exciting cause necessary to develop the complaint.

The diagnosis of syphilitic epilepsy is as exact and satisfactory in certain cases as it is uncertain and tentative in others. In all cases it rests upon our ability to attain a complete syphilitic history, to discern evidences of the persistence of the disease in the patient under examination, and upon the results of specific treatment. No phenomenon of epilepsy, not connected with the above circumstances, can be considered pathognomonic. Cases in which a syphilitic taint can be excluded, will be found to present all the appearances relied upon by some to show a specific causation. Local paralysis, the rapid succession of attacks with long intervals of freedom, nocturnal paroxysms—in fact, any or all the symptoms occasionally or generally present in syphilitic epilepsy, will be found equally common, not only in cases which present no evidences of specific disease either by history or personal examination, but in individuals who have been subjected to prolonged anti-syphilitic treatment. And further, these same cases will have their unfortunate condition ameliorated, and in some instances be completely cured, by methods of treatment purely anti-epileptic.

The treatment of cases of epilepsy due to syphilitic poisoning depends mainly upon the length of time the patient has been subject to convulsions and the presence of evidence of syphilitic disease. The effects of specific remedies will vary greatly, as regards their power to control the convulsions, with the former circumstance. When the convulsive seizures are of recent date, and but few attacks have occurred, the iodide of potassium, either singly or combined with some form of mercury, will prove sufficient not only to dissipate the syphilitic symptoms, but to cure the epilepsy. If the convulsions have recurred frequently, and been present for a length of time, anti-syphilitic remedies alone will, in the vast majority of cases, prove ineffectual. With such, it is necessary to resort to measures especially adapted to prevent the recurrence of the paroxysms. The epileptic habit then becomes an important element, and attention must be directed to breaking it up. That provision of the nervous system by which voluntary acts become more and more easy with each repetition, and finally reach that stage in which they can be performed unconsciously, appears also to be in active operation in the same manner, to accustom the system to involuntary and unconscious acts of pathological origin. It is a matter of observation that convulsive seizures, excited by evanescent causes, after a certain amount of repetition, persist apparently from the force of habit long after their original cause has disappeared, and with each recurrence not only become more easily excited, but grow more inveterate. In such cases curative measures must be directed to the eradication of this convulsive tendency—this epileptic habit.

For this reason, the treatment of each individual case of epilepsy becomes a matter for special study. The general health of the patient must be carefully looked after, and if any error of nutrition is present, appropriate remedies must be prescribed. In any case where there is even the faintest reason to suspect the presence of syphilitic taint, it is justifiable to resort to anti-syphilitic remedies, and give the patient the benefit of the doubt. No possible harm can result from a trial of the iodide of potassium, and where there is any difficulty of this nature, the benefit will be at once apparent.

In an article published in the February number of the *New York Medical Journal*, I briefly referred to the value of the ophthalmoscope as a means of determining the immediate cause of the paroxysms in cases of epilepsy accompanied by derangements of the cerebral circulation. I am fully convinced that the persistent and careful observation of the brain-circulation, as revealed by changes in the blood-supply of the retina, not only affords an explanation of many otherwise obscure phenomena of the disease, but affords a ready means of determining the effects of remedies.

In those cases where the evidences of specific disease are doubtful, and no favorable result has been obtained from anti-syphilitic treatment, as also in any case of epilepsy in which we are compelled to resort to measures intended to control the paroxysms simply, the ophthalmoscopic appearances afford rational indications for therapeutical procedure. It is unnecessary to dwell upon the well-known fact that those widely opposite conditions—congestion and anæmia of the brain—are equally competent to produce convulsive phenomena. Physiological experiments have not only demonstrated that fact, but they lead us to infer that those many and widely diverse bodily conditions which induce this disease, do so by altering the quantity and quality of the blood circulating through the brain. There is but one method by which we can determine the condition of the cerebral circulation with any approach to accuracy, and that is by the employment of the ophthalmoscope. Congestion of the cerebral structures is then known by the presence of evidences of overfulness of the retinal vessels, while the opposite condition of the intra-ocular structures indicates intra-cranial anæmia. These two opposite conditions are distinctive of two classes of epileptics, and afford rational indications for treatment. The one class will be benefited and the other injured by the ordinary plan of administering large doses of bromide of potassium without regard to other circumstances than the fact that the individual has epilepsy.

In regulating measures of treatment calculated to break up the epileptic habit, this plan will prove of great service. While with appropriate constitutional treatment the tissue-changes which primarily induced the disease can be removed, these examinations, by giving information of the state of the cerebral circulation, will enable us to avoid producing any undue effect with our remedies, and so keep the paroxysms in abeyance until a sufficient length of time has elapsed to allow the nervous system to recover its healthy tone. This will of course vary with different cases; but with those in which a specific taint is the exciting cause, I think it can be confidently asserted that, along with constitutional measures, any course of procedure which will keep the paroxysms in abeyance for a year, will eradicate the epileptic tendency. I have yet to meet with a case of epilepsy, of any description, in which the paroxysms have returned after such a course had been adopted for that length of time.

ON AMPUTATION OF REDUNDANT SCROTUM IN THE TREATMENT OF VARICOCELE.

ILLUSTRATED WITH A NEW INSTRUMENT.

BY M. H. HENRY, M. D.,

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There is probably no disease of an idiopathic character connected with the genital organs of such frequent occurrence as a varicose condition of the spermatic veins. It has been, I think, fairly estimated that at least ten per cent. of all male adults suffer more or less from this inconvenient, and, at times, distressing and dangerous condition of the parts. Assuming these to be the facts, I certainly can offer no better reason for advocating an operation (originally suggested by Sir Astley Cooper), which promises, judging from my own experience, and that of other surgeons in this city, better general results than any other means resorted to, so far as I know, up to this time. While the operation has met with favor and successful results in this city, it seems to have been almost entirely neglected in England, where it originated; while in France and Germany little or no heed seems to have been paid to it.

With the general objective features of the disease all surgeons are so familiar that we need scarcely repeat them in this paper; but, in order to appreciate the benefits of, and the indications for, the operation, it is necessary to consider somewhat in detail the pathological changes which take place in the various structures composing the scrotum. It would be foreign to the purposes of this paper to enter into any explanation of the reason why varicocele occurs so frequently on the left side, and so rarely, if ever, on the right side.

The main pathological changes that take place in the veins are, first, the elongation of the vein; secondly, its tortuosity; thirdly, the loss of the function of its valvular apparatus; and fourthly, the loss of resiliency of the veins, which is of various degrees of intensity. This loss of resiliency is due to certain structural changes which take place in the walls of the vein, consisting of a thickening of their coats by proliferation of their connective tissue elements, following which there occurs fatty degeneration of the muscular elements, which, later on, may increase to a complete calcific degeneration.

In taking these changes into consideration it will be readily seen that the various cases met with in every-day practice present phases varying in proportion to the extent of the progress of the pathological changes—namely, those in which there is very little loss of resiliency in which the varicocele would be slight, and those in which there is an absolute and entire loss, in which case the varicocele would be exceedingly large. As a result of this varicose condition of the veins, greater or less atrophic changes may take place in the testicle. These changes which take place in the veins react on the scrotum, which gradually becomes lengthened and redundant. This redundancy which is probably due to an atony of its dartos muscle, may consist of walls of scrotal tissue of normal thickness, but from clinical observation I think we are warranted in stating that there is thinning of the scrotal walls in the majority of cases: the intensity of this condition is in direct relation to the extent of the varicosity. It may be well to mention in this connection that in many cases, particularly where this thinning of the scrotal walls exists, there is often observed a decided enlargement of the superficial scrotal veins. To relieve these complex conditions existing in varicocele, of which we have given this cursory sketch, many operations and appliances have been advocated by the various authors in the works on surgery.

It may be well to remember that in a large number of cases after the veins have attained a certain size, they seem to accommodate themselves, to a great extent, within the distended scrotum, and cause little or no acute pain. Even in these favorable cases, however, acute symptoms are likely at any time to manifest themselves and set up under certain circumstances all the distressing and painful features of the most inveterate forms of the disease. Aside from the distress caused by the "dragging sensation" and pains in the loins and thighs, complained of by patients, the inconvenience of chafing to persons in warm climates, and those constantly on their feet, is of no small account, and certainly calls for such surgical interference as promises relief.

The aims of the surgeons who have paid most attention to this disease have been mainly to find some palliative to relieve this morbid condition; while others have exerted themselves to establish a treatment that promised a radical cure.

Among the many appliances that have been advocated at different times, I have found none that have afforded the relief claimed by their authors. The plan suggested by Mr. Wormald is simply a temporary palliative. He proposed to lessen the scrotal bag by drawing a portion of it through a ring made of soft silver covered with wash leather, and then preventing its escape by pressing the sides of the ring together.* This could not possibly afford more than temporary relief, or during the continuance of the applied instrument.

In the use of a truss with the pad pressing on the external ring to diminish the calibre of the spermatic veins, and advocated by Mr. Curling, only a small number are benefited after using the instrument for many months. The great difficulty in keeping the pad nicely adjusted to the proper spot, the general inconveniences experienced in wearing a truss, and the small chance of a radical cure, certainly offer little temptation to surgeons to adopt this measure of treatment. The method of slinging up the testicle, suggested by Mr. Morgan of Dublin, is exceedingly irksome to the patient, and scarcely offers more advantages than the apparatus and methods I have already mentioned.

I am daily more than ever convinced that the best appliance yet suggested for temporary relief is a good, clean, nicely fitted suspensory bandage, and I know of none that possess the essential wants better than those I have used for some time past, made of perforated vulcanized rubber cloth, with a good strong, elastic band and simple tape fastening. Care should be exercised to get one that fits well—not too tight nor too loose. They seem to exert a very gentle pressure and at the same time support evenly all the parts; besides these advantages, they can be easily cleaned with a sponge or damp cloth.

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* Holmes' *Surgery*, Vol. IV., p. 613.

All the operations heretofore suggested for the radical cure of the disease have had for their object the occlusion of the veins. Very little can be said in favor of the complex operations proposed by the French surgeons. Those of MM. Ricord and Vidal, of obliterating the veins by ligature and *enroulement*, besides being attended with danger, are in a large proportion of cases of little or no benefit; and even when the obliteration is perfect it is too often associated with complete atrophy of the testicle. The injection in the veins of persulphate of iron, advocated a few years ago, scarcely deserves mention, owing to the danger of exciting phlebitis. A French surgeon, M. Dubrueil, in a recent number of the *Bulletin Gén. de Thérapeutique*, proposes a modification of Vidal's operation of obliterating the veins by the application of the Galvano-cautery. He claims that by this operation phlebitis is avoided. Having never resorted to this procedure, I am unable to speak of its merits.

Many have doubtless been deterred from performing the operation which it is my purpose to advocate, from an impression that it was a difficult and dangerous one, owing to the want of a proper instrument to serve as a guide and at the same time control the hæmorrhage. I must confess, when I first saw the operation done, some years ago, with an exceedingly clumsy and imperfect pair of forceps, I was not specially or favorably impressed; the excellent result, however, that attended the case, and which I had an opportunity of watching, led me to think more seriously on the subject and of the means of overcoming the difficulties in the way. After many experiments under my direction, Mr. Pfarre, of the firm of Tieman & Co., succeeded in making an instrument which, I think, answers all the indications.

DESCRIPTION OF INSTRUMENT.

The instrument which I have called Scrotal Forceps consists of two parts.

The main part of the instrument, Fig. 1, has two double curved blades, made of steel, ten inches long, sufficiently heavy to give strength, and admit of pressure without injury when used. The handles *a* are large enough to admit finger or thumb without cramping.

Fig 1.

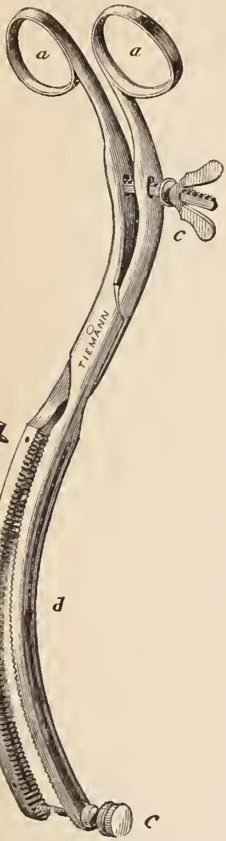

Fig. 2.

The lower half of the instrument below the joint *b* is fenestrated in both blades; the coapting surfaces are evenly notched to prevent the tissues from slipping—affording, according to experience, a more secure hold on the soft parts with less pressure and less injury than smooth surfaces. The fenestra afford the surgeon the facility of inserting all his ligatures before dividing the parts, should he elect this method of bringing the edges together. The thickness of the upper blade from the line of insertion of the ligatures, leaving ample tissue to assist union, and if the incision be a clean one the equal pressure or tension will prevent, as far as any effort or care can control, ulceration through the stitches before union has taken place. The curve in the blades is made according to natural lines, which it is desirable to follow in removal of the scrotum.

The handles are curved so that, while they maintain a direct median line, do not interfere or press on the genital parts; beside giving additional security and compactness to the whole. The screws in the handle and the end of the blades *c* give additional security during the operation without the aid of an assistant.

The extra blade, Fig. 2, is made of steel, nickel-plated, and is maintained in the right blade of the forceps by two small pins and the slight tension put on the spring of the metal. It is easily inserted with a little pressure; and removed as easily by inserting the nail or the handle of any instrument between the two blades and dislodging it.

When the operator prefers the glover's, or running stitch, the extra blade is used as a guide in the amputation of the parts. When this is accomplished, by displacing the blade, a free border is exposed—about the sixth of an inch in thickness—and in a minute or so the wound can be stitched perfectly without any inconvenience. The forceps are, of course, not removed until this is accomplished.

In the removal of a redundant scrotum in the manner I shall describe, for the relief of varicocele, no more than ordinary surgical skill is called for. The success of any delicate surgical operation depends mainly on the care and management before, during, and subsequent to the operation. I have ventured to allude to many little details because I am fully impressed that that they bear a most important relation to the chances of success.

Before the operation, the patient should have free evacuation from the bowels, to avoid the necessity of getting up or being disturbed for twenty-four hours after the operation.

Besides the forceps which I have already described, the only instruments necessary are,—a pair of large, strong scissors with flat blades, or blades curved flatwise; needles, with either silk or fine silver wire for sutures; a few acupressure needles; a few *serres-fines*, and some adhesive plaster. Before any anesthetic is administered the patient should be carefully examined, and the forceps applied while in a standing position; this will enable the surgeon to lift up the testes, and afford him the best opportunity to decide the exact portion of scrotum to be removed. If this precaution be taken, there is no danger whatever of his removing too much tissue. I am satisfied there is much more danger of his not cutting off enough. The patient being placed in a recumbent position, his thighs well separated with folded towels, the forceps are applied by placing the blades in front and under the anterior portion of the scrotum, and held in a direct median line. The end of the forceps being close to the perinæum, the scrotum is engaged between the blades of the forceps. Care must, of course, be exercised not to include anything more than the scrotum. As soon as they are adjusted and the proper amount of tissue to be removed engaged between the blades, the screws should be tightened and the part removed.

Although I have described above a method of operating through the fenestra, I prefer the operation with the extra blade, with this exception, that instead of the running stitch I use the ordinary interrupted suture; while it is not so quickly performed, it offers great advantages if it should subsequently be found necessary to divide one or two stitches in case of hæmorrhage or in case of severe œdema. If the running stitch be used, and either of these last-named features should present themselves, if any division whatever be made in the course of the running stitch, there is danger of breaking up through the entire course of the wound whatever union may have taken place. If the interrupted suture be used, however, each stitch being independent of its neighbor affords facilities under these circumstances which I think are of no small value.

Teats, or angular points, are sometimes left at each end of the wound, which prove, at times, extremely annoying and unsightly; this may be avoided by a slight rounding of the corners when the part is removed.

Should any vessel be divided requiring special attention, the application of a small acupressure needle will be found most serviceable. If the bleeding occurs on or very near the border of the incised parts, I apply a *serre-fine.*

In persons of a feeble or debilitated constitution diffuse hemorrhage may occur, as it might in any surgical operation. This is best treated by the local application of a solution of the persulphate of iron. In persons of a true hæmorrhagic diathesis the operation should not be performed.

It has been suggested that there was danger of a retraction of the dartos muscle in amputation of the scrotum; this, I think, cannot possibly occur if the forceps are used and applied with a little care. Even if such an accident should take place, the spasmodic action—for it is scarcely more—can be easily overcome by the application of iced cold water.

Among the main objections urged against this treatment by persons who have never witnessed any of the good results of the operation, is the fear of erysipelas. I have never seen any complication of the kind follow the operation, nor do I believe that there is any greater tendency to excite any phlegmonous inflammation in this operation than there is in any other surgical procedure in other parts of the body.

The treatment following the operation is very simple: a few strips of adhësive plaster are fastened round the testes to assist in maintaining the cut edges of the scrotum in perfect apposition and to prevent any dragging on the stiches. A broad strip of adhesive plaster is then placed under the most dependent part of the scrotum and fastened on either side of and above the pubis. The wound should be kept perfectly clean and sponged three or four times daily with a weak solution of carbolic acid and water. Should any untoward symptoms manifest themselves they would, of course, be treated on general principles.

When the wound has entirely healed, and the patient able to go about, I have been in the habit of advising the use of a suspensory bandage for a short time. This precautionary measure is, I think, of decided benefit, allowing, or rather assisting, the enlarged veins to recover from their morbid size and condition, and affording the scrotal tissue proper the benefit of a support. Due attention to these details has, I feel assured, enabled me to attain the most satisfactory results in the operation I have described in this paper.

THE PHYSIOLOGY OF SYPHILITIC INFECTION.*

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Upon a careful review of the writings and the doctrines of leading syphilographers in regard to the origin of syphilis and the mode by which the human system is infected by it, a careful consideration for all forces us to the conclusion:

1st. That, in regard to its origin, the accumulated learning of centuries affords but the most unsatisfactory speculations.

2d. That nothing is yet positively known of its nature. Accepted as a virus, with a power to contaminate the blood, it is known only by its effects.

3d. That nothing is yet positively known of the mode by which the human system is infected by it. We may accept as the generally received opinion the expression of Lancereaux, that "the agents of the absorption of the syphilitic poison are those of other substances, viz.: the venous capillaries, and, more especially, the lymphatic vessels." This, certainly, covers all the necessities of the case; but can we afford thus to dismiss a subject of so great practical moment? If the veins and lymphatics are both concerned in the absorptive process, we must of necessity conclude that through the venous capillaries the virus is carried at once into the general circulation, like the poisons of vaccine, small-pox, etc. If, however, it can be shown that it is through the lymphatics alone that infection takes place, a possible interval between the occurrence of the inoculation and the constitutional infection may occur. Practically, this distinction has long been claimed as a result of clinical observation, but resting upon no substantial basis; great differences of opinion prevail among modern authorities in regard to the matter.

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* Read before the New York County Medical Society, June 5, 1871.

Thus, CAZENAVE, BEAUMES, VIDAL, BARENSPRUNG, DIDAY, BILLROTH, HENRY LEE, BUMSTEAD, MARTINS, BASSEREAU, BAZIN, GIBERT, and many others, believe that the virus enters the circulation and infects the system at large at the moment of inoculation; while, on the contrary, RICORD, MICHELAIS, MELCHIOR, ROBERT WALLACE, PUCHE, LINDWURM, SIGMUND, LANGSTON PARKER, BELHOMME, LANGLEBERT, LANCEREAUX, and many others, claim that the virus does *not* enter the blood at the moment of inoculation, but that a distinct interval—one of several days—always occurs between inoculation and constitutional infection.

The position of the advocates of instant constitutional infection, in view of the acknowledged fact that the venous capillaries are the absorbents proper of the cutaneous envelope, is most excellent. It is true, a limited power of absorption is also accorded to the lymphatic capillaries, but if the venous capillaries absorb *any* of the virus, practically constitutional infection must occur at once, just the same as if no lymphatics existed. Unless, then, it can be shown that the venous capillaries do not absorb the syphilitic principle or virus *at all*, and that this office is always confined to the lymphatic capillaries, the theory of instant infection must prevail.

Since MAJENDIE deprived the lymphatics of their place as chief absorbents of the system, by proving that this office was delegated to the veins, there has been not a little speculation as to the actual uses of the lymphatic system in the human economy. One of the most recent, and apparently one of the most philosophical, theories in regard to the function of the lymphatics, appears to be that of Dr. ROBERT WILLIS, of London (1867), who claims that the lymphatic system is chiefly an under-drainage system. "According to present physiological views, there is an acknowledged necessity for a difference in the density of the arterial and venous currents of the blood, in order that osmosis may be possible. It is well understood that "the arteries exude and the veins imbibe. Did not the blood, however, between its outward and inward course, lose something by which its quality was *altered*—by which its density especially was *augmented*, there would be no endosmosis into the returning channels, in the sense in which the word is understood in physiology, viz., *penetration, with increase in bulk of the body or liquid penetrated.*"

"Vessels, entitled lymphatics or absorbents, one essential function of which," says Dr. Willis, "I believe to be the abstraction of a certain quantity of the watery element of the blood, for the specific end of rendering the returning stream in the deeper seated parts of the body of greater density than the outgoing stream."

This view of the office of the lymphatic system is virtually confirmed (in 1869) by Professor F. Von Recklinghausen in the following terms:

"In consequence of the pressure under which the blood courses through the vessels of the several organs of the body, the tissues are constantly permeated with serous fluid, which partly furnishes the materials requisite for their nutrition, and is in part, also, subservient to the preparation of the secretions. This serous or tissue fluid requires constant renewal—a rapid exchange of material, without which it quickly alters the composition of the various tissue elements around which it plays. The passage of fresh fluid from the blood into the tissues would cease, however, as soon as the pressure of the latter approximated that under which the blood moves in the vessels, were not a constant escape of the fluid provided for by means of a canal system which is so far separate from the blood-vessels supplying the tissues, that the pressure of the blood is not transmitted directly into the canal system, that is to say, not with its full force. These canals, the lymph vessels, therefore, form a peculiar system, the rootlets of which are distributed through the tissues, and which only so far stand in connection with the blood-vessels in that it,—

"*First*, indirectly withdraws from them the fluid they contain; and, *Second*, that it ultimately returns that fluid to the blood-vessels by its terminal trunks. According to these views, there is, then, a constant movement of the fluids bathing the tissues, toward the lymphatic canals. Here, then, we take the first step in support of a syphilitic infection through the medium of the lymphatic system alone."

Let us now for a moment recall the statement of Beale in regard to the nature of the disease germs of contagious diseases, viz.: "That it is a molecule of germinal matter, derived by direct descent from the living matter of man's organism—living matter which retains its life after the death of the organism in which it was produced—living matter which has descended from the living matter of health, but which has acquired the property of retaining its life under new conditions—living matter destroyed with difficulty, and possessing such wonderful energy that it will grow and multiply when removed from the seat of its development and transferred to another situation, provided only that it be supplied with suitable nutrient pabulum." This disease germ is, then, a living, moving entity—an amœboid cell, possessing, like the white corpuscle of the blood, the vital movement and a like power of multiplication, demonstrated by Beale and Chaveau in the fluid of the vaccine virus. Let us assume a similar disease germ to be the essential element of the syphilitic virus, as claimed, though not yet practically demonstrated by Beale; and, further, let us apply the secretion containing this living syphilitic disease germ to the abraded cutaneous surface of a hypothetical subject. We have now two separate influences which may act separately or conjointly to carry this disease germ into the lymphatic circulation: 1st, the current of tissue-fluid, which constantly sets toward the lymphatic vessels. 2d, the power of amœboid movement of the germ itself.

It is one of the few well-settled points in regard to the syphilitic virus that, when free from extraneous matters, it is bland and unirritating in its character. Its application to a wound or an abrasion does not in any perceptible degree interfere with the natural, rapid, and complete healing of the part; and yet a tendency to the coagulation of albuminous materials—a separation of the fibrinous elements of the fluids brought within its influence—is universally accepted. It is reasonable, then, to suppose, as a very slight interference with the physiological processes of a given tissue will give rise to the coagulation of its albuminoid element, that this result occurs on application of the syphilitic disease germ to the abraded surface; and that this, while compatible with the natural and complete healing of the abrasion, would interfere to a greater or less degree with the movements of the disease germ. Mialhe has shown that solutions which readily coagulate the albumen of the circulating fluids may yet be absorbed, though very slowly. Bearing this in mind, it now becomes necessary to consider the anatomical arrangement of the lymphatic capillary system in its relation to the *surface* of an abrasion of integument or mucous membrane. The statement is made by Robin, and supported by Panozza, Sappey, and other anatomists, that "the lymphatic system" stands in no immediate relation with the blood-vascular system; on the contrary, as might be inferred from the office of the lymphatic system, as an under-drainage agent for the blood-vascular system, it holds its course as far as possible from the blood-capillaries. Says Recklinghausen: "All fluids escaping from the blood-capillaries must traverse tissue to reach the lymphatic capillaries." "In those membranes which present a free surface covered with an epithelium, as in the mucous and serous membranes and the skin, the lymph capillaries are found constantly occupying a deeper plane than the blood-vessels; whilst the latter ascend till they lie just beneath the epithelium. The lymphatic capillaries do not reach the uppermost stratum of the connective tissue." . . .

The relations of the lymphatic capillary system to the *surrounding tissue* is at present a subject of controversy, as to whether it is a system of closed canals, or whether they stand in open communication with the tissues with which they are in relation. Kolliker, Teichman, Fry, His, Sanger, Ballajiff, Robin, Dybskousky, and Conhiem assert that they are closed at their origin; while Virchow, Leydig, Chronszczewsky, and Donders claim that they are in communication with a system of serous tubules, formed by the fusion of the membranes of connective tissue corpuscles. Still a third party—Recklinghausen and Schweigger-Seidel—that they are in open relation with the surrounding connective tissue by distinct interspaces or canals which they term lymph paths. To this last view Stricker also evidently inclines, affording, as he says, a better explanation of what is at present known than any other. But whether we adopt the theory of a closed origin for the lymphatic capillaries, and with it the accepted accompanying view that their walls are composed of a soft protoplasm; or that they present numerous stomata or permanent openings; or that of the open lymph paths of Recklinghausen, the passage of amœboid cells from the tissues into the interior of the lymphatic capillaries is made possible. In either case, tissue must be transverse—tissue bathed in albuminous fluid, the current of which is setting in the direction of the lymphatic canals.

Having, then, applied to the surface of the abrasion the living syphilitic disease-germ of Beale, $\frac{1}{100000}$ of an inch or less in diameter, with an amœboid power and a capacity to appropriate nutriment and to generate its kind, what follows? Its movement is with the current; and though its progress is retarded by a more or less complete coagulation of the tissue fluids, its tendency is still toward a lymphatic canal, and aided possibly by its own vital movement, after a period more or less prolonged, dependent upon the difficulties in its path and the distance to be traversed, it is finally ushered into the interior of that vessel.

Again, if we fail to find sufficient evidence of the capacity of the independent amœboid disease germ to find its way into the lymphatic vessel, we have but to recall what has been advanced and proven by Conhiem and others in regard to the nature and peculiar powers of the white blood corpuscle which represents the germinal element of the animal organism. Attracted by the occurrence of an irritation at any given point, this nomadic corpuscle, stretching out its processes, draws itself along through any and every tissue that may intervene. Capable of seizing its nutriment by entrapping it in its undulating tentaculæ, and of enfolding and incorporating with its own elements, not germinal matter alone, but foreign substances, as proven by actual experiment. Attracted to the locality upon which a myriad of almost infinitesimal disease-germs have been deposited, as will occur in a natural syphilitic inoculation, is it too much to believe that these molecules would not escape the omnivorous capacity of this wandering white blood corpuscle, or that, incorporated by it into its substance, the demands of this other and more active life, joined to and stimulating its own, should appropriate from the surrounding pabulum such undue proportion as would result in hastening to an abnormal degree the natural process of fission of the white corpuscle? And that myriads of new cells, thus hurried into being, incorporated with and impregnated by the proliferating molecules of the disease-germ, should be set loose in the tissue, sooner or later to find or force their way into the adjacent lymphatic capillaries?

But why, you may possibly ask, in the presence of the open mouths of the blood capillaries, is not this infinitesimal disease-germ taken up and incorporated with their contents, and thus at once gain access to the general circulation? Simply, as I apprehend, from the fact that it is not a virus, as ordinarily conceived, that constitutes the syphilitic influence, but a living, abnormally active bioplast, developing, multiplying, by appropriating as its pabulum the healthy bioplasm which goes to regenerate the fluids and solids of the healthy human organism; and hence, formed material cannot afford the proper pabulum for its nutrition. Unformed germinal matter alone can appropriate it or be appropriated by and combine with it. Not the *tissues* nor the *red blood corpuscles, which are formed matter*, but the *germinal* element of the blood and tissues *alone*, are affected by its power or influence, which would appear to be but to unduly stimulate and accelerate the normal processes of nutrition and development of the germinal element of the blood and tissues. The local action at the point of inoculation appears to me as follows:

1st. A coagulation of the superficial tissue fluids. A dilatation of the superficial blood-vessels. A consequent slowing of the circulation. The coincident attraction of a variable number of wandering white blood corpuscles—phenomena associated with any irritation of living tissue.

2d. An entrapment of the syphilitic disease-germ by the wandering white blood corpuscle (through its amœboid movement), and the incorporation of the disease-germ into the substance of the white corpuscle.

3d. An appropriation (as pabulum) by the disease-germ of the substance of the white corpuscle, and the consequent development and multiplication of the disease-germ *in* the white corpuscle.

4th. A consequent necessity of the white corpuscle for an increased supply of pabulum from the tissue fluids, the absorption of which, producing a rapid increase in size, and an abnormal tendency to fission or multiplication of the white corpuscle through whose substance the multiplied disease-germs are now disseminated.

5th. Through the multiplication of the white corpuscle thus impregnated by the syphilitic disease-germs, the spread of the syphilitic influence at the point of inoculation, and from thence into the adjacent natural channels of the white corpuscle, viz., the lymphatic canals, through which, by aid of the lymphatic current, they are carried along until arrested in the substance of the nearest lymphatic gland.

While, however, certain of the wandering white corpuscles, incorporated with the syphilitic disease-germs, are stimulated to abnormal proliferation, and go on to spread their influence beyond the sphere of their immediate action, certain other, whose predestined office is that of connective tissue cells, become arrested in the coagulated albuminous medium at the point of inoculation, become fixed, and develop into connective tissue fibrillæ, after the manner described by BILLROTH of the formation of normal cicatricial tissue, between which and the induration associated with and considered peculiar to the primary syphilitic lesion there appears to be but the difference of exaggerated formative power.

A corroboration of this view is found in the fact that the depth and extent of the induration of the initial syphilitic lesion in like situations is found to be decreased in some proportion to the decreased activity of the virus inoculated—having its maximum when originating from a typical initial lesion—modified in its extent and depth, if not its density, when occurring from secondary or degenerated sources of origin.

The influence of the disease germ, as it eventually comes to be felt in the lymphatic vessels underlying the inoculated point, is in accordance with its accepted power to separate and organize the fibrin contained in the lymph, and thus to add rapidly to the induration previously originated in the connective tissue corpuscles outside the lymphatic canals, and underlying the abraded surface.

I am aware of an impression, conveyed by authorities, that the induration associated with the initial lesion of syphilis is made up of a specific syphilitic material, and not of normal tissue elements; but microscopical examinations of recent normal cicatricial tissue, and of syphilitic induration-tissue, do not reveal any characteristics not compatible with the assumption of an identical origin, and a similar process of development in the two instances.

That differences ultimately arise cannot be denied; but these differences are probably in degree of development, rather than of kind, and are, besides, in some measure dependent upon the different conditions of the parts in which the processes are carried on.

In the case of the normal cicatrix, we have a permanent useful tissue, in which vessels of nutrition are developed; in point of fact, a new formation, supplying a want occurring from a previous loss of substance; whereas the syphilitic induration is developed in and upon normal tissues in which vessels of nutrition are present—formed, under the unnatural stimulus or influence of the syphilitic disease germs, into a denser tissue than the normal cicatricial tissue, and by which the included vessels of nutrition are embarrassed in their functions, and not seldom strangulated in its embrace; producing, when the lymphatic capillaries alone are obstructed, a solution of continuity from lack of free passage for the returning tissue fluids, and thus setting up a process of disintegration which VIRCHOW terms a necrobiosis—"death brought on by altered life;" or when the blood-capillaries are disabled, a positive necrosis is established; in some cases even loss of the entire mass of induration by actual gangrene: all of which occurrences are observed and recognized as varieties of the infecting chancre, or initial lesion of syphilis.

In the foregoing plan or theory of syphilitic infection, it will be observed that an important feature of syphilis, accepted and insisted on by all authorities, is entirely omitted, viz.: *The Period of Incubation.*

This period of incubation is defined as "the interval of apparent rest," occurring between the inoculation of the syphilitic virus in a given subject, and the appearance of the specific local lesion at the inoculated point; which lesion is stated to be the result of a local reaction consequent upon a general infection of the system—this occurring at the point of inoculation alone.

It may appear as an induration simply, or as an abrasion or ulceration with or without induration, at first, but which, after a variable period, acquires an induration considered specific, announcing the infection of the general system, and marking the termination of the incubative period.

In thirty-six well-authenticated experimental inoculations of the syphilitic virus, made and reported by BARENSPRUNG, CULLERRIER, AUZIAS TURRENNE, WALLACE, WALLER, VIDAL, GALLIGO, RHINECKER, DANNIELSSEN, HEBRA, LINDWURM, KUSSMAUL, PELLIZARI, GIBERT, and the anonymous surgeon of the Palatinate, the earliest period transpiring from inoculation to the appearance of the local lesion was 10 days; the latest, 46 days; the the mean, 24 days. Of these four were inoculated with the secretion of an indurated chancre, resulting in one case in an incubative period of 10 days; another of 39 days; another of 17 days; another of 46 days.

Five were inoculated with the secretion from mucus tubercles, resulting in an incubation in one case of 28 days; one of 17 days; one of 25 days; one of 16 days; and one of 18 days.

Three inoculated with syphilitic blood, with an incubation in one of 34 days; in another of 25 days; in the third of 28 days.

DIDAY reports 28 cases having a mean of 14 days. AIME MARTIN, of Paris, reports the case of a girl, under surveillance in the St. Lazari Prison, where the period from exposure to the appearance of the local lesion was 72 days. M. FOURNIER one with an apparent incubation of 70 days. Dr. BUMSTEAD one of 50 days. Dr. HAMMOND adduces an example, with a history circumstantially minute, where the period between the exposure and the appearance of the characteristic indurated syphilitic lesion was but 36 hours.

Thus we see that in the cases of experimental inoculation, where the quality of the virus was known and the time of its inoculation positively established—cases in which, if in any, we have a right to expect a certain degree of uniformity in results—

a difference of 36 days between the extremes, and yet no noteworthy difference appears to have occurred from the employment of different kinds of virus. In the four clinical cases subsequently quoted, there appears a difference of over 70 days in the periods of incubation. From whence comes this remarkable lack of uniformity in processes apparently similar, under conditions practically the same? Shall it be referred to constitutional idiosyncracy alone?

Two cases are reported to me by Dr. R. W. TAYLOR as occurring at the New York Dispensary during the past year—one with an incubation of eight and one of 10 days—in which the local lesion was in both cases situated just at the anterior junction of the frenum with the glans penis.

In Dr. HAMMOND's case, with an incubation of 36 hours, the lesion was described as at the frenum.

Now, it is at just this point that the superficial lymphatics of the glans penis approach nearest to the surface, rising in this especial locality, in some instances, according to BELAIEFF, to a point just underneath the epithelium.

Farther observations, which shall result in connecting a brief period of incubation with the occurrence of the initial lesion at the anterior and inferior extremity of the glans penis, may yet be made, and afford a corroboration to my own view of the incubative period of syphilis, viz., that is the period required for the syphilitic disease-germ to traverse the distance from the point of inoculation to the interior of a lymphatic vessel, by the processes described in a previous part of this paper. Consequently, according to this view, syphilis is a local disease up to the period of the entrance of the disease-germ into a lymphatic canal; and I am also of the opinion that, instead of infecting the system at large, even at this time, it passes on through the lymphatic vessel into the parenchyma of the lymphatic gland, with which it is connected, where it is retained by conditions arising from the character of the parenchyma of the gland, and the coagulation of its tissue fluids, for a period corresponding to the so-called secondary incubation of syphilis, recognized by all authorities as taking place before the constitutional evidences of the disease are ever manifested.

In conclusion, I would state my belief in the possibility of a satisfactory explanation of some of the later manifestations of syphilis through causes wholly dependent upon interference—with the *lymphatic* circulation; and that further researches in the direction I have indicated will corroborate my claim, *that it is the germinal element of the blood and tissues alone that is primarily affected in syphilitic disease;* that it is through the *lymphatic* system alone that the syphilitic influence is propagated to parts remote from the point of inoculation; and, finally, that it is to deposits of fibrin organized through the syphilitic influence in and around the lymph vessels and lymph sacs in the earlier stages of the disease, and its subsequent contraction, that the lymphatic obstructions resulting in various external and internal lesions in the later stages of the disease are chiefly due.

Clinical Contributions.

TWO CASES OF EXTERNAL URETHROTOMY.*

BY J. C. HUTCHISON, M. D.,

Surgeon to the Brooklyn City Hospital.

CASE. I.—OLD TRAUMATIC STRICTURE OF THE URETHRA, FOR WHICH EXTERNAL URETHROTOMY WAS PERFORMED A SECOND TIME.—RECOVERY.

J. W., a sailor, aged 38, entered the Hospital Nov. 21, 1870, and gave the following history: Eighteen years ago he fell from a vessel into one of the small boats, striking his perineum upon the edge of it, one leg going inside the other outside of the boat. Soon after this fall he passed a large quantity of blood from the penis, with a good deal of pain in micturition. The pain slowly passed away, but he noticed the size of the stream of urine growing gradually smaller. About ten years ago, while on a voyage from the East Indies, he noticed a lump in his perineum, after urinating, which would pass away in a couple of hours, but not without giving him a good deal of pain. About four months after this he went to an infirmary in Newcastle, England, where he remained five weeks. While there, attempts to pass sounds were made, but without success. The swelling in the perineum was pierced with a needle, and the urine passed through the opening for a week or two, when it closed. He went home from here, and perineal section was performed at his mother's house on the second day after leaving the Infirmary, by a surgeon in Newcastle. Had a flexible catheter in his urethra for sixteen days after the operation, at the end of which time the wound had healed. He then left his bed against the doctor's wishes. A No. X. sound was passed twice subsequently.

He remained pretty well until two years ago, when he noticed his stream growing smaller. About this time he was shipwrecked and much exposed, but thinks it did not aggravate his stricture. Had no pain until August last (1870), when, after leaving the port of New York, he suffered greatly from the stricture, and the urine passed by drops from a fistulous opening in the perineum. When he entered the hospital a stricture was discovered at the bulbous portion of the urethra—the site of the former operation. There was a small fistulous opening in the perineum, and the urethra was indurated behind the scrotum by inflammatory deposits in the corpus spongiosum. Urine contained no albumen. Rest, warm baths, appropriate regimen, and constitutional treatment, for two months, afforded but little relief to the symptoms. During this period frequent and patient efforts were made (twice when under the influence of ether) to introduce instruments into the bladder, but without success, and on the 18th of January, 1871, Dr. Hutchison determined, as a last resort, to perform external urethrotomy. After the patient was etherized, preparatory to the operation, another effort was made to pass a filiform bougie, which, very unexpectedly to the surgeon, found its way into the bladder. Using the bougie as a guide, Prof. Gouley's grooved catheter was passed down to the face of the stricture. This was cut down upon from the perineum in the median line, and a grooved probe introduced by the side of the bougie into the bladder, on which the stricture was divided with a very narrow-bladed knife. The grooved catheter was then readily passed into the bladder. There was but little hæmorrhage, and no unpleasant symptoms of any kind occurred. The patient was kept quiet in bed. An occasional dose of opium and quinine was given, and a No. 10 catheter was introduced daily, through which the bladder was washed out with warm water for a week or two, on account of a slight cystitis which had existed for several months. No untoward symptoms occurred until the eighth day, when a point of inflammation appeared in the scrotum, which soon suppurated, and was evacuated by incision. The patient's general condition is remarkably good. A small fistula still remains. He was discharged from the Hospital to-day, March 23d, at his own request, and was advised to introduce daily a No. XII. sound (which had been used for some time) until the fistula closed, and subsequently to use the sound once a week.

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* Reported by House Surgeons Wm. Burt and J. D. Rushmore.

CASE 2.—EXCESSIVELY IRRITABLE URETHRA, WITH EXTENSIVE STRICTURE. EXTERNAL URETHROTOMY WITHOUT A GUIDE.—RECOVERY.

J. S., a sailor, aged 38, was admitted into the Brooklyn City Hospital November 18, 1870, suffering from stricture of the urethra. His general condition was fair. Twenty years ago he had an attack of gonorrhœa, which became chronic and harassed him for more than two years, when he noticed that the stream of urine was growing smaller. Eight years ago he entered this Hospital and remained six months. No sound or bougie could be passed into the bladder, although many attempts were made. Went directly from here to the New York Hospital where he remained seven weeks. A No. 1 sound was passed after being there ten days, and a No. 5 before leaving that institution. Three years after this, while at sea, a small abscess formed in the perineum, which terminated in a fistulous opening, through which he passed urine one week, when it healed. When readmitted into this hospital on the day above mentioned, the smallest filiform bougie could not be passed through the stricture. Frequent attempts have been made, with and without anæsthesia, unsuccessfully. His urethra is very irritable, and the introduction of instruments is followed by severe urethral fever. Urine free from albumen. The stricture began at the bulb of the urethra. His sleep was disturbed by a constant desire to make water, giving rise to frequent and painful acts of micturition. The perineum is indurated in the course of the urethra. Having failed in getting an instrument through the stricture after as careful and frequent manipulations as the excessive irritability of the urethra would permit, Dr. Hutchison, as a last extremity, performed external urethrotomy on the 18th of January, 1871. A catheter was passed down to the seat of stricture and its point was exposed by an incision which extended to within a short distance of the margin of the anus. An effort was then made to carry a small grooved director through the contraction to the bladder; but this could not be accomplished, and the dissection was continued through the structures in the median line, following the urethra as closely as possible until the continuity of the passage was restored. The catheter was now carried onwards into the bladder and secured in the usual way. About one and a half inches of the instrument was exposed at the bottom of the wound, showing the extent to which the urethra had been divided. It was deemed advisable in this case, owing to the difficulty in passing a catheter down to the wound on account of a false passage which existed in the spongy portion of the urethra into which the instrument inevitably passed, to retain a catheter in the bladder, in order that the direct passage might be established. This produced severe rigors and fever attended with vomiting, which subsided when the instrument was removed at the end of four days. A catheter was passed into the bladder every morning, and he took opium and quinine *pro re nata*. A small abscess formed in the scrotum soon after the operation, which was opened, and, with the exception of an attack of rheumatism, to which he was subject, his recovery was satisfactory.

REMARKS.—In remarking upon the above cases, both of which were operated upon at the same clinique, Dr. Hutchison stated that perineal section had been performed but four times in this hospital (including the above two cases), during the period of fifteen years that he had been connected with the institution. For these four operations he was himself responsible, and he had found it necessary to do the operation on only one other case in another institution. This statement may appear surprising in view of the fact that from thirty to forty cases of urethral stricture, many of them of a severe character, are annually treated in this hospital. He had often treated cases of stricture for weeks before the smallest instrument could be passed into the bladder; but when, by patience and perseverance, this was accomplished, he had rarely failed to restore the canal to its normal size by gradual dilatation with steel sounds. For the last four years, however, it had been his custom to hasten the cure by splitting the stricture with Holt's instrument as soon as a No. 3 sound could be introduced. His experience with Holt's operation comprised about twenty-five cases; the results had been satisfactory, and he regarded this method of treatment as far preferable to gradual dilatation, to external urethrotomy or to "Syme's operation," in appropriate cases. In the first case, and in one other case on which he had performed perineal section some time ago, he thought the operation had been materially facilitated by the use of Prof. Gouley's instruments. In conclusion, he expressed the opinion that external urethrotomy, judging from the comparative infrequency with which it had been performed here, would be very rarely found necessary, if the surgeon would patiently and persistently use the simpler methods of treating urethral stricture. He heartily endorsed the opinion of Sir Henry Thompson, that "the case must be bad indeed in which we are compelled to resort to it as a means of cure."

TWO CASES IN WHICH THE PERIOD OF INCUBATION OF THE INITIAL LESION OF SYPHILIS WAS VERY SHORT.

BY R. W. TAYLOR, M. D.,

Surgeon to the New York Dispensary—Department of Venereal and Skin Diseases.

The two following cases of syphilis present interesting features, in the fact that their period of incubation was much shorter than is ordinarily observed:

M. M., a Pole, aged 32, came to the New York Dispensary, January 17, 1870, and presented a very peculiar lesion upon the penis, about which he was much concerned. Upon the inner aspect of the right lip of the meatus urinarius was a spot about the size of the heads of two pins, which presented a silvery appearance. It was not at all elevated, but directly continuous, without any elevation or fissure with the surrounding membrane, and there was no fissure, however slight, through the spot itself, as I examined it carefully with the aid of a magnifying glass. I thought that perhaps the man had cauterized it with nitrate of silver, but he said he had not interfered at all with it. He further stated that he had had connection with a woman the day before, and that he noticed this spot that morning. It was evident that the lesion consisted in some change produced upon the superficial epithelial cells of the part. Prof. Boeck, of Christiania, who was present with me at the examination, and observed the case carefully, remarked that he had seen the initial lesion of syphilis once or twice before begin in this manner upon the penis, and that he had often observed it commence in this form in the mouths of children; this latter fact I have verified clinically since my attention was thus called to it. I suggested to Dr. Boeck that the incubation was very short, but he said that this happened exceptionally. I then questioned the man very minutely, and he persisted in his statement that he had not had any connection except the one for months, and that then he had cohabited with his wife, whom he had at that time left in Europe. In the two succeeding days the area of the silvery patch increased very little, and in four days a small amount of induration could be distinctly felt, as the parts were so accessible to careful manipulation. In a week a distinct indurated nodule was formed, which very much everted the lip of the meatus. The inguinal ganglia had by this time become perceptibly enlarged. When the nodule, which, though no larger than a small pea, but which was very firm in consistence, had existed about a week, the epithelial scales which covered it were cast off, and then a very slightly grayish ulcerated surface was observed, the granulations of which were very small, and it was covered with a very scant viscid secretion. At Dr. Boeck's suggestion I inoculated some of this secretion upon the hypogastrium of the patient, and when the scarifications had healed, at the end of about three days, a very minute, pale-red papule appeared, which at the end of a week had a diameter of about one third of an inch, and an elevation of about one-third of a line. Dr. Boeck informed me that he had observed the same thing quite often when inoculating with the secretion of an unirritated hard chancre. This papule remained without any other change than a slight desquamation, for about a month. The indurated sore remained in a sluggish condition for about six weeks, when a roseola, erythema of fauces, and general malaise supervened, which were all treated by mercury, and disappeared quite rapidly. I have seen him this year again, and treated him for a relapse, and at the same time saw his wife, and ascertained that she had not had syphilis prior to her arrival in this country.

The chief point of interest in this case is the remarkably short time in which the initial lesion of syphilis was developed. And, as there could certainly be no motive on the part of the patient to deceive me by saying that he had had but the one suspicious connection, we may reasonably accept it as a case quite unique in itself. I am fully aware of the many difficulties and sources of error to be encountered in clinical observation, and I endeavored, as far as possible, to eliminate any fallacies. But the interest of the case is not alone confined to its short incubation, but it is also very interesting in its course. We seldom have the opportunity of inspection of a hard chancre from its first evolution to its maturity and involution, but in this case all the features attendant upon these stages were accurately traced. Again, another point of clinical interest is the development of a papule by auto-inoculation of its secretion.

F. G., German, 21 years of age, came to me on the 19th of February, 1871, and presented a fissure extending in the median line from the preputial orifice up to the point of insertion of the frænum into the glans penis. It had an irregular, slightly ulcerated surface, and palpable induration was observed in its whole extent. The inguinal ganglia were slightly enlarged, one on the left side being rather larger than the rest. He said that exactly one week before he had had his only connection with a woman, and that in the act he had torn his prepuce, which was naturally long and tight. I ordered him to dress the ulcer with a very mild solution of carbolic acid; but it gradually became more indurated, until it produced complete phymosis, and then I advised him to inject the same lotion between the parts. It ran a sluggish course, the inguinal ganglia became larger and harder, and he had a roseola in five weeks, which would be exactly six weeks from the day of connection.

Reviews.

HEBRA AND KOHN ON DISEASES OF THE SKIN.[*]

It is with feelings of great pleasure that we welcome another *Lieferung* of Professor Hebra's treatise on diseases of the skin. Such a long period had elapsed since the appearance of his former publication (in 1860) that, though a continuation of the work was promised, we almost began to despair of ever receiving it. However, a few months ago the long-expected production came to us, and we propose presenting a brief resumé of the same, referring to some of the more interesting and striking points. As our friends are aware, the former portion of Hebra's book was, with the exception of several papers, written by himself, and now in the present *volume*, the Professor gives us but a few pages, while the remainder is written by Dr. Kohn. But this is what we have been anticipating, for we were told that for the continuation of his work, we must look to his assistant and son-in-law, Dr. Moriz Kohn, who would sooner or later undertake the task. Dr. Kohn has held the position of assistant to Prof. Hebra for the past five years; and apart from his connection with the Hospital as a teacher, is well known both here and abroad for his original investigations and valuable contributions. Having been associated with the department for so long a time, he not only has enjoyed the full confidence and esteem of his master, but also has had ample opportunity of investigating many rare and interesting diseases, which have from time to time presented at the clinic. Considering, then, the position which Dr. Kohn occupies, we are not at all surprized that Prof. Hebra has given him the privilege of completing the work he began, and which, owing to advanced years and the numerous duties devolving upon him, he felt himself unable to finish. In the writings of Dr. Kohn we are quite sure to have a full expression of the views and doctrines of his teacher, as well as his own where they may happen to differ, and therefore in reality, we may consider the present work as an exponent of Hebra's ideas.

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[*] Hautkrankheiten. Von Prof. Hebra und Dr. Moriz Kohn. Virchow's *Handbuch der Speciellen Pathologie und Therapie.* III. Band. II. Theil I. Lieferung. Erlangen, 1870.

The present *Leiferung* begins where the last one left off, with the sixth class (Hypertrophiæ) of Hebra's classification. Cutaneous Hypertrophies are divided into *Pigment Anomalies*, *Keratoses*, and *Connective-tissue-hypertrophies*. Under the first division Hebra, who writes this article himself, considers lentigo, chloasma, and melasma. By the word lentigo he designates all those pigment spots, from the size of a pin-head to a pea, which usually occur on the face, though they may exist on any part of the body. In other words, the affection commonly called freckles; but Prof. Hebra objects to this latter word, or its synonym in German, because he does not regard that these spots are in any way produced by either light, heat, or air. In proof of this assertion he says that he has found these appearances upon all parts of the body, even upon the buttocks and penis, which parts it is scarcely to be supposed would be continuously exposed to the sun in European capitals. Chloasma, which he divides into idiopathic and symptomatic, is defined as being characterized by yellow or yellowish-brown spots the size of a hand or even a plate, occurring on any part of the body, generally on the face and trunk, more rarely on the extremities, more or less circumscribed, and sharply defined. He refers to the fact that this appearance is sometimes mistaken for pityriasis versicolor, and warns against such a grievous error. It is fortunate that Prof. Hebra has given a definite meaning to this term, for it has been employed to designate several affections by various writers, and great confusion has always attended its use. Now that it has been accurately defined and described, let us abide by the decision. Under idiopathic chloasma he arranges C. traumaticum, C. toxicum, and C. caloricum; while under symptomatic, he places C. uterinum and C. cachecticorum, referring in this connection also to Morbus Addisonii.

By the term Melasma the author simply means a dark pigmentation of the skin, varying as to color. Characteristic of this anomaly, we notice that the skin is never uniformly pigmented, but that the patches occur scattered and irregular, in various portions of the body. To this division also belong Pellagra and Alibert's Acrodynia. In regard to the cause of these various pigment affections but little light is given us, and we must be satisfied for the present with the knowledge that they are produced by causes more than one. The various nævi which children occasionally bring into the world with them, and which are popularly attributed to some influence made upon the mother during gestation, our author denies being produced by impressions made upon the mother, for he tells us, if such were the case, undoubtedly appearances of this nature would occur oftener than one in a thousand infants. Several pages are devoted to the treatment of these anomalies and explicit directions given in regard to the method. A curious fact which Hebra refers to is, that among the many caustics there are certain ones which, having destroyed the epidermis, tend to produce a greater amount of coloring matter than existed in the first place; on the other hand, certain caustics, after their application, cause a diminution of pigment. To the first class belong croton oil, cantharides, mustard, and sulphuric acid; while among the latter acetic acid, borax, caustic alkalies, and corrosive sublimate are enumerated as being more prominent. Hence we have two classes of caustics, the one to be shunned, the other to be selected for the treatmant of these stains. In order to free one of these marks in the shortest time possible, it is well to use a strong solution of corrosive sublimate, five grains to the ounce of water. Great care should be taken in the use of this powerful poison lest drops run into the eye, nose, or mouth. The mode of application is as follows:—The patient should be in the horizontal position; compresses soaked in the solution should be fitted to the part affected and applied continuously, kept constantly wet. Care should be taken that the compresses remain in close contact to the skin. In the course of four hours the epidermis will have been raised in blisters; these should be emptied, and dusted with starch or powder in the same manner as other blebs. In the course of a few days the scab loosens and drops off, leaving the new epidermis clean and free from abnormal pigment.

Next in order comes a chapter devoted to Keratoses, by which is meant a thickened condition of the epidermic tissue of the skin, such as we see in the form of warts, corns, horny tumors, ichthyosis, etc. This division is subdivided into those affections where there is no alteration of the papillæ, as in callosities, corns, and horny tumors; and secondly, into those where we find a marked change in the papillæ, as in warts and ichthyosis. Ichthyosis, the fish-skin disease, is defined as being a disorder of the skin which shows itself by the building of light or dark-colored, rough-feeling epidermic masses, which adhere closely to the under cutis, and cause the natural lines and furrows of the skin to become much more marked than normal. We would remark here, that Hebra, in his writings seldom attempts to define diseases of the skin with a limited number of words in a short sentence, but rather prefers giving a concise statement of the typical appearances, bringing to the mind a clinical picture of the disease. To a close observer, the superiority of this method of definition for cutaneous diseases is clearly apparent, for experience has proved that it is an utter impossibility to include all the phases of a disease in one sentence comprised of a given number of words. It is just here that we have a clue to the difficulty and confusion which writers have from time to time produced, by endeavoring to make diseases suit their own arbitrary definitions instead of describing concisely what they saw. One of the great drawbacks to progress has been the desire and endeavor to reconcile diseases to the narrow and insufficient definitions laid down by writers, but happily the error of this method of study has been detected, and we are now slowly emerging from the chaos.

In discussing the period of life at which ichthyosis appears, Hebra gives as his experience that this affection never begins to show itself until the second or third year of childhood, and that in one sense it is not a congenital disease, inasmuch as at birth no sign of the abnormality is to be found. However, usually with the second year symptoms develop, beginning with pityriasis, then ichthyosis simplex, and going on to the severer varieties, as the case may be. The treatment of this life-long affection is mainly palliative, and the means employed are those which tend to relieve the sufferer by rendering the skin soft, pliable, and thin, the most efficacious of which are preparations of oil and fat, certain soaps and the various appliances of hydropathy. The prognosis here is unfavorable, and our author tells us that the affection still must be classed with the incurable diseases.

With ichthyosis we take leave of the Professor, and follow out the writings of his pupil to the end of the volume. The first subject which Dr. Kohn takes up is *Hypertrophy of the Hair, Hypertrichosis.* The subject here being an unimportant one, a few pages suffice to dispose of it, and the writer next takes up the so-called "Weichselzopf," or the Plica Polonica.

Knowing the interest that both Prof. Hebra and Dr. Kohn have shown in arguing against this popular delusion, we are not surprized to see quite an essay, mainly for the purpose of denying the existence of the so-called disease. The errors and superstitions which even physicians have fallen into and adhered to so pertinaciously are here shown up and explained, while the correct interpretation of this condition, simply a matting together and twisting of the hair through neglect and want of cleanliness, is given quite at length. Hypertrophy of the nails, onychogryphosis, comes next and receives some ten pages which are well-worked-up and interesting.

We now come to the third divsion of Hebra's sixth class, *Hypertrophies of the connective tissue* (bindegewebshypertrophien), under which head Dr. Kohn discusses scleroderma, elephantiasis arabum, and the so-called Framboesia. The author begins his remarks on scleroderma adultorum with a full history of the affection, from the time when Thirial first described the disease in 1845, down to the present epoch. He defines it to be an idiopathic diseased alteration in the skin, which shows itself principally in a diffuse and conspicuous hardness, together with rigidness and relative shortening of the affected skin. The article on this affection is a valuable one, treating as it does, of a rare and most peculiar condition, and we regret that space forbids us from reviewing it in detail.

Sclerema neonatorum is taken up, and a few pages suffice to refer briefly to the pathology, cause, anatomy, and treatment of this affection of the young, when our author proceeds to investigate a much more important disorder, namely, elephantiasis-arabum. This he subdivides into el. cruris, el. genitalium, and el. teleangiecktodes. As causes of elephantiasis arabum of the leg he mentions varicose veins, chronic eczema, and sores on the feet, scars, etc.; in fact, all causes which tend to produce a gradual or long-continued obstruction in the circulation of the fluids of the part. The three varieties are ably discussed, and give us an interesting paper on this form of hypertrophy.

Dr. Kohn now comes upon a subject about which there has been and still is great confusion, to such an extent indeed as to wish that the word had never been invented; we refer to Framboesia. The term has always been enveloped in mystery and darkness—at one time representing a form of syphilis; now, a simple papillary growth; again, a disease sui generis; and finally, applicable alike to all diseases bearing a fungoid appearance. Indeed, if we consult authors we shall see that the word has been employed to denote several distinct processes and diseases, and hence has arisen the uncertainty as to what the affection really was.

Dr. Kohn having discussed the question fully, and recognizing the perplexity which the use of this term Framboesia involves, suggests that it be dropped from the nomenclature of dermatology and syphilography, and when such fungous-looking growths present, to note the primary disease and affix the surname "Papillare." For genuine papillary new growths of this character, the word "Papilloma" is recommended; and with this change in terminology we would express ourselves entirely in accord, for to perpetuate the term Framboesia, with its present meaning, is only to trammel our nomenclature with a useless and ill-fated word.

Atrophiæ Cutaneæ; Hebra's seventh class. Under pigment-atrophies leucoderma is the first condition treated of, and by this general name is meant, a condition which is characterized by the want of pigment, causing the skin to have a white appearance.

It may be either congenital or acquired, and spread over the whole body, or confined to a part. Leucoderma is divided into congenital, popularly called albinismus, and into acquired, which form is known as Vitiligo. This latter disease Kohn describes as being a disorder of the skin which appears as round, oval, sharply-defined, white, smooth spots which continually increase in size, while the edges are framed with a dark pigment. The condition is that commonly known as "piebald," and though incurable, causes no alarm beyond the disfiguration.

We now arrive at *atrophy of the hair-pigment*, or graying of the hair. Gray hair appears as congenital, or, in later years, as acquired. Dr. Kohn, giving his own ideas together with those of his master, offers us a most interesting and condensed paper on this topic. Having spoken of the manner in which the hair usually becomes gray, through a gradual arrest of the pigment in the papillæ, the subject of the hair turning gray in one night, suddenly, is freely discussed and the cases on record quoted; but our author tells us that this sudden changing in the color of the hair is by no means in accord with the physiological growth of the hair and the normal manner of pigmentation. The cases recorded concerning this sudden blanching of the hair neither Kohn nor Hebra consider as complete, inasmuch as the hairs were not carefully examined the day before the supposed change; and hence, basing their investigations and studies upon physiological anatomical grounds, they arrive at the conclusion that the hairs become gray only from their roots and papillæ, as they are shoved out, devoid of pigment; and, accordingly, that the hairs only become gray *gradually*, from below upwards, and in the period which their physiological growth requires. Whether we accept this theory, or whether we consider the cases of Landois and others as satisfactory and complete, and believe that the hair may turn gray in a single night by the entrance of air-bubbles into it, the question still remains an interesting one, and is open for both further investigation and additional proof.

Atrophy of the Hair.—This is a morbid disturbance in the typical growth of the hair. Under the general name Alopecia, Kohn classes all forms of deficient hair growth, either congenital or acquired, regardless of cause. Alopecia Adnata, Alop. Acquisita, Alop. Senilis, and Alop. Præmatura, are all briefly referred to, and then Alop. Areata is taken up and discussed to some extent. In regard to the nature of this affection, we are pleased to notice the writer express his views and those of Hebra decidedly, and in opposition to any parasitic origin. The discussion in regard to the nature of this disease has been progressing quite briskly for the last few years, some few dermatologists still clinging to the old parasitic theory, but of late the evidence in favor of the affection being due to an atrophy has been so strong, that we trust there will be but little cause or room for argument henceforth. There can be no doubt but that Tinea Tonsurans has not infrequently been mistaken for Alop. Areata, and hence has arisen the uncertainty as to its nature, but if some of our dermatologists would only use more care in their microscopical investigations, errors in diagnosis would be fewer, and we should have facts ranging themselves in bold opposition to theories.

With regard to the treatment of Alop. Areata, Dr. Kohn, agreeing with other writers, recommends the use of stimulating applications to the affected part, though he tells us that it matters but little which lotion we employ, the disease usually having a course to run, over which treatment has but a limited influence. The prognosis is favorable, inasmuch as the disorder sooner or later ceases spontaneously.

Alopecia præmatura symptomatica. By this form of Alopecia is meant baldness which results as a direct consequence from disease of the skin-structure, namely, of the hair-follicles and sebaceous glands. This form of Alopecia is therefore a symptom of some disease in these structures. We notice the hairs falling out of the follicles, either singly or in numbers, in many diseases, as in Acne, Sycosis, Tinea Tonsurans, Favus, Lichen Scrophulosorum and numerous other processes, in fact in all diseases where the follicles are attacked with inflammation and suppuration. One of the most frequent causes of early baldness is the affection known as Seborrhea of the head, or Pityriasis Capitis as it is called; this form of premature Alopecia, Kohn proposes designating Alopecia Furfuracea. It is a very common affection, and is described in a most thorough and graphic manner, the minutiæ and points of interest being spoken of in extenso, while the treatment, divided into local and internal, is given with full and valuable details. To finish this class there remains but one other form to refer to—Alop. Syphilitica, to which however, but a few pages are allowed. This chapter of the various alopecias is perhaps the most interesting and complete in the volume, referring to affections that the physician meets with continually.

To *atrophy of the hair itself*, due to structure-change, and to *atrophy of the nails*, two short articles are given, and then follows *atrophy of the skin itself*. Under diffuse idiopathic atrophy of the skin, our author introduces an affection which he has called xeroderma, or parchment skin, a rare disease, of which he has seen but two cases. This condition, however, must not be confounded with the xeroderma, or ichthyosis simplex of Wilson, which is quite another process. Alas! could we only have some control over nomenclature! But to continue, three short chapters are devoted respectively to *senile*, *partial idiopathic*, and *acute symptomatic* atrophy of the skin, and with these we find the volume brought to an end, and we are forced to take leave of our author for a time.

The work is written in an easy and fluent manner, and to comment upon the style of one known so well in the dermatological world as Dr. Kohn, is uncalled for. The diseases and subjects considered are all discussed and disposed of in that thorough and scientific manner so characteristic of the first book of Hebra, and the present Lieferung, we may remark, is one worthy in every way to take its place with the preceding. In a work like the one before us, containing so much of interest and value to the dermatologist, a brief summary, such as I have attempted to give, is at best but very imperfect and unsatisfactory, and can present merely an outline of the subject. To those interested in these diseases we would suggest an early and careful perusal of this scientific and solid treatise, while to the authors we would express our cordial thanks for having given us a valuable contribution to dermatology.

Louis A. Duhring, M. D.

WILSON'S LECTURES ON DERMATOLOGY.*

These lectures are six in number, and were delivered in the Royal College of Surgeons, January, 1870. Prof. Wilson is the Nestor of British Dermatology, of whom Tilbury Fox, M. D., says, in dedicating his text-book to him: "For a lifetime you have almost single-handed fought the battle of British Cutaneous medicine." Prof. Wilson's works have for years been accepted as authority, by the mass of the profession in this country, as evidenced by the many American editions through which his text-book has passed.

In 1869, Prof. Wilson endowed a chair of Dermatology in the Royal College of Surgeons of England, and presented a valuable collection of models, &c., illustrating the affections of the skin, to the College museum. The council of the College appointed him to the chair of Dermatology, therefore, these lectures, which form the first course delivered, must be regarded as the *ex cathedra* platform of British cutaneous medicine.

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* *Lectures on Dermatology; a synopsis of Diseases of the Skin.* By Erasmus Wilson, F. R. S., F. R. C. S., Member of the Council and Professor of Dermatology, of the Royal College of Surgeons of England. I. & A. Churchill, London, 1871.

In the interest manifested by the profession of all nationalities, in developing during the past fifteen years what is called "modern dermatology," British dermatologists have contributed largely toward systematizing the mass of materials advanced. While France has developed the etiology and diagnosis of skin diseases, Germany their pathology, Great Britain has done much to render their treatment conservative, and in accordance with advanced therapeutics.

The present lectures were delivered before the Fellows of the College, hence, they are intended for the practitioner, rather than for the student of medicine. In them the field of cutaneous pathology has been so ably epitomized, that these few lectures afford the reader a much more complete idea of the specialty than is afforded by the majority of more pretentious treatises. Using the author's own language, there is presented "a framework in which every variety of cutaneous lesion has its separate and appropriate place."

On the subject of nomenclature and classification our author shows his usual predilection. No one can read any of his valuable writings without realizing how much he weakens the force of his labors, by insisting too pertinaciously and exhaustively upon this the least important of any branch of his subject. For ourselves, we think that if all existing classifications could be swept away by some fortuitous convulsion of the dermatological world, that the great *impediment* would be removed, to the establishment of a classification based on the fundamental departments of medical science. Then we might, by aid of the progressive lights of histology and physiology, both normal and abnormal, hope to place a knowledge of this specialty within the reach of all who possess an acquaintance with these reconstructing departments of medicine: thus would be obviated the labor of having to master a labyrinth of obsolete, unmeaning and unintelligible names (without the aid of Greek and Latin lexicons), the very sight of which are enough to deter the practitioner, much more the student of medicine from attacking them.

The "clinical classification" advanced by Prof. Wilson is with some modifications the one published in his "Student's Hand-book of Cutaneous Medicine." Our limited space will not permit us to consider its merits *pro* and *con;* while we would say of it that it possesses many features of convenience, we at the same time discern many points of incongruity, unnecessary repetitions, needless refinements, and—to the mass of the profession—an incomprehensible nomenclature. In saying this, we do so believing that all classifications are more or less amenable to the same criticisms. We must differ with Prof. Wilson in the utility of saddling, as he and other authors do, special affections of the skin with long tables of names of their varieties, according to their development, appearance, distribution, etc. We regard all such refinements of the nomenclature as devoid of any practical aids to diagnosis or treatment, while they serve to confuse and complicate the subject. Two tables of no little interest are presented by the author, viz.: a list of Greek dermatological terms collected from the works of Hippocrates, also, one of Greek and Latin synonyms.

The general pathology opens with the following fundamental statements, that "the most important modern discovery in reference to the *anatomy* of the skin, is that of the permanence and organization of the rete mucosum, and its nutritive operations in the elaboration of pigment and the formation of the horny epidermis. The *physiology* of the skin is exemplified in its growth, its color, and its structure, in its secreting and absorbing function, and its sensibility; and its *pathology* is manifested by its aberration from the normal standard of structure and function." We regard it as a grave omission on Prof. Wilson's part not to have dwelt upon the importance of the anatomical discovery he alludes to; as it is, he leaves the reader with the bare statement of a fact, which constitutes the basis upon which the pathology of the most frequent affections of the skin have been elucidated. In enumerating functions our author has omitted to mention, either by implication or otherwise, the respiratory function of the skin, also the regulation, by evaporation from its surface, of the animal heat of the body.

The lesions of the skin are subdivided into "Primary and Secondary." Of primary, nine are given, viz.: "Rubor, Macula, Papula, Tuberculum, Tuber, Bulla, Vesicula, Pustula, Squama." Of secondary eight, viz.: "Desquamation, Induration, Incrustation, Excoriation, Fission, Ulceration, Cicatrization, Discoloration." This division of the lesions is eminently practical. The term *rubor* is much to be preferred to either *exanthema* or *erythema;* but it strikes us that it would have been still better to have left out rubor altogether as a distinct lesion, and included it under *macula*, as Bazin does. After all, rubor is but a red stain: indeed, Professor Wilson himself implies as much, when he says; "Macula or stain is another form of coloration of the skin." We would take exception to the addition to the accepted lesions, of *tuber*, as unwarranted and unnecessary. The descriptions of the several lesions are brief and clear, but with one or two exceptions their pathology, as elucidated by the cell—changes of the tissues of the derma and epiderma, are not alluded to.

The symptomatology of the several affections of the skin, leave us nothing to desire; they are short, but so graphic that they serve to make the appearances stand out before the reader, because of the happy colloquial style in which they are described. The constant distinctions drawn between *similar* affections, constitute succinctly the points in differential diagnosis, and preclude the possibility of the confusion of eruptions, which sometimes follows the reading of more lengthy writings. Indeed, the main object of the lectures appears to have been to classify the affections, and to present in review the distinctive appearances of the several eruptive phenomena of the skin, with only incidental references to their etiology, pathology, diagnosis and treatment.

Under the head of general *etiology* we find the following epitome of causes, viz., "Defect of development, error of nutrition, mal-assimilation, irritation, external and internal, and specific poisons."

In the consideration of the general treatment of eruptions occur these general indications, viz.: "The treatment of diseases of the skin is founded upon the cause and upon the habits of the pathological phenomena. There is nothing more (in their treatment) than is comprehended in the general principles of surgery adapted to an existing necessity. There are very few specifics for diseases in general; for diseases of the skin it may be said that there are none. Arsenic might be cited as a specific; but arsenic is nothing more than a tonic—possibly a nerve tonic—and obeys the same laws as other tonics; it is only suitable after a course of preparation by other remedies, and by no means acts in all cases equally. With few exceptions, the medicines adapted to the improvement of the general health are those best suited to combat with cutaneous disease, and those that exert a stimulant or tonic influence have gained the highest amount of reputation." In these few lines we have the key to the successful treatment of any and all the affections of the skin. By "habits of the pathological phenomena" is undoubtedly meant the tendency of the lesions, whether to be self-limited or of a short or long duration. The second statement is intended to convey the idea that there is nothing that is special in the treatment of these affections; it simply consists in applying "the general principles of surgery." The last statement, as coming from such an authority as Professor Wilson, will serve to dispel the idea held by many, of the infallible virtue of this or that *prescription* for the internal or external medication of a given skin affection. This tendency to practice medicine by prescriptions, instead of treating disease by the use of therapeutic agents and regimen upon the pure scientific basis of *causa marborum versus modus operandi et medendi* of such agents or regimen, is not only the besetting sin of general practitioners in the treatment of the eruptive phenomena of the skin, but it also undermines the administration of all medicines for all diseases.

Of the articles on special affections, we were particularly struck with those on Eczematous affections, Lepra (or psoriasis) and the eruptions dependent upon vegetable parasites. Of eczema, he says: "The grand type of inflammation of the skin is eczema; it is the commonest of the affections of the skin, occurring in the proportion of one out of every three examples of cutaneous disease; it is met with at every period of life, from early infancy to extreme old age; it presents every degree of severity and extent." Some practical generalizations as to the effects of a blister are brought to bear on the various lesions of inflammation, viz.: "If we apply a vesicant to the skin, we produce at first redness, then a blister, and if we prolong the irritation sufficiently, we shall have a chronic secreting surface, and lastly, we may occasion the death of the part. . . . The redness or erythema is the type of erythematous affections; the blister typifies pemphigus or the phlyctenous affections; the chronic secreting surface is the type of eczema and the eczematous affections; while the death of a portion of the skin, consequent on inflammation is the type of furunculus, or the furunculous affections."

Under eczematous affections Professor Wilson includes six eruptions, viz.: "the typical polymorphic eczema; then there are the dry, indurated, and squamous forms of eczema—namely, psoriasis and pityriasis; the papulous forms, lichen and strophulous; and the pustulous, impetigo." The Professor draws a distinction between his "typical polymorphic eczema" and the other forms of eczematous affections. The term polymorphic is intended to imply that it may present in "six several lesions,—to use the language of Willan—a papula, a squama, an exanthema, a pustula, and a vesicula." To these might have been added, as secondary lesions, desquamation, induration, incrustation, excoriation, and fission. We incline to regard the psoriasis, pityriasis, lichen, strophulous, and impetigo, which the author attempts to sever from his typical polymorphic eczema, as in themselves simply the polymorphic forms. We would fully endorse the position which he gives to scabies, as eczema produced by an external irritant. Professor Wilson gives the name *psoriasis*, to a simple state of chronic eczema, thus leading to no little confusion to the casual reader. This misapplication of a generally accepted term for a well-defined affection is made on a pretext of nomenclature, viz.: the correct derivation of the word psoriasis from psora, to *rub.* This name the author says was applied as a general name for eczema, the scaly stage of which was called *psora leprodes* or rough psora, hence *psoriasis.* We fail to see the sequence as clearly as our author, and do not think that it warrants the appropriation of the name of a distinct eruption to a stage of another. There is an accepted alphabet to every department of medical science, which, however faulty it may be, we cannot change without the violation and disjointing of received conceptions. Who would deem it practical or judicious to change the term *artery* because the vessels so called do not contain *air* as the ancient anatomists supposed? Or call *hydrogen oxygen*, because hydrogen and not oxygen is the real *acid generator?*

The affection called Psoriasis by all other authors is described under the name of *Lepra* (Græcorum) from λεπρος, rough, scaly. In describing this eruption the author makes the following statement, which is well worthy of investigation, viz.: "A careful inquiry into the antecedents of patients affected with lepra shows that it is frequently hereditary, and that in cases where it is not hereditary, phthisis, or struma, or cancer, may be discovered to exist in the parents or blood-relations; and, again, that the children of leprous parents are predisposed to phthisis as well as to lepra. In these facts we have an explanation of the diathetic nature of the disease, and of its very common outbreak in persons who are sound and healthful in every other particular; in fact, the presence of lepra would seem to carry with it an immunity against either phthisis or cancer."

We have always been at a loss to account for the position taken by Professor Wilson, that the presence of vegetable parasites is not the cause of affections of the skin. He argues that the appearances which to all other dermatologists present all the characters and give all the evidences of vegetable organisms, by their progressive development and growth, when isolated from the epidermis, are simply the elements of the epidermis which have undergone degeneration from their normal animal type, and have fallen into a state which he terms *granular degeneration.* He furthermore says: "That the granular degeneration of the epidermis assumes the appearance of a plant-like or phytiform growth, and in this respect puts on a pathological form different from other diseases of the skin, there can be no question; and, in conformity with this, I have assigned to the group of diseases included under this head the generic term *phytosis.*" This reasoning we regard as merely begging the question at issue, and a great embarrassment to the progress of the specialty. In advancing these opinions Professor Wilson has subjected himself to the severest criticisms; for the unanimously expressed opinions of all other authorities in the specialty regard these microscopic bodies as actual vegetable organisms, and the actual cause of the lesions. Every one is, of course, entitled to an honest difference of opinion, but at the same time we should not too hastily reject the opinions of others. In closing, we would say that, while we cannot agree in every particular with Professor Wilson, we would heartily indorse and recommend this work to the general practitioner as a most convenient "synopsis of the diseases of the skin," which he will often find a compass that will prevent him from being cast on the many shoals of doubt that encompass the diagnosis of the multiple affections of the cutaneous envelope.

F. D. W.

Selections from Foreign Journals.

ON THE ANATOMY OF PRURIGO.

BY DR. ALEXANDER GAY, OF KASAN.

TRANSLATED FROM THE "ARCHIV FŪR DERMATOLOGIE UND SYPHILIS," BY DR. HUGO KUENTSLER.

THE fact that the papillæ are enlarged in prurigo has already been established by Hebra; he, however, attaches no special importance to it, as he states that it occurs in almost all of the chronic skin diseases. He further considers the participation of the hair follicles and sebaceous glands in prurigo as in the highest degree probable, his reasons being substantially the following: "Whether and in what precise manner the glandular apparatus in this disease becomes affected, cannot be definitely made out; still, the fact cannot be denied, that the palm of the hand and sole of the foot always remain free from prurigo, and that individual papules are frequently perforated at their apex by a hair, and therefore it appears probable that the sebaceous glands participate in the pathological process. There is, moreover, still another circumstance, which shows that the sebaceous glands and the roots of the hair are simultaneously affected in this disease, and that is the frequency of the peculiar affection of these glands described by Willan under the name moluscum contagiosum, consisting in the accumulation of sebum in the excretory canal with subsequent distension and protrusion of the latter."

While Hebra considers the prurigo papules due to accumulation of fluid in the deepest layers of the epidermis—a view to which he was led by slicing off the point of the papule, and by that process causing the exudation of a yellow fluid consisting of blood corpuscles, epidermal cells, and some pus cells. Neumann explains the origin of these papules by an increase of cells with exudation into the papillæ. Neumann further states the results of the prurigo as the following: the epidermis and rete malpighii are more developed and contain more pigment, the cutis and papillæ at the same time become thickened by dense connective tissue, the external hair-sheath is bulged out more, and the follicle assumes the shape of a club. Derby devoted himself more minutely with the anatomy of this affection, paying special attention to the hair and the locality which surrounds it. According to him the chief change takes place in the external root-sheath, which is bulged out in a simple or lobulated form at the insertion of the arrector muscle, consisting of the same cell elements as the sheath itself, and finding its way between the cells of the muscle. In some of these processes he could observe a space very much resembling a cyst. The muscle itself is more developed, and its constantly contracted condition explains, according to him, these processes of the external hair-sheath. The hair then becomes thinner, and is more liable to split. Around the hair follicle he observed numerous round glistening cells, readily colored by carmine, and enlarged blood-vessels in the bulb and papillæ. In the texture of the corium Derby found empty cavities surrounded by a fibrous texture containing here and there some round cells; he regarded these cavities as distended lymph-spaces. He probably arrived at this conclusion from no other reason than that the cells here and there found in these cavities resembled the lymph-corpuscles; but he could not demonstrate even with injections of nitrate of silver, an endothelium lining these cavities, which would be evidence of their really being lymph spaces.

I subjected the skin of a patient aged ten, who was affected with prurigo and who died of pneumonia, to a careful microscopic examination, and will here describe the results:

Portions of skin from different regions were taken, some from where the process was far advanced (anterior surface of tibia), others from where the disease was less acute (anterior surface of thigh), and finally some from where the process had just commenced (over patella). In the necessary preparation the Vienna method was followed. Some pieces were hardened in chromic acid, 1 to 400, others in Muller's fluid; the latter had no advantage over the former, as in each the parts were equally well preserved. Having left them six or eight days in the acid, I kept them in diluted alcohol for several days, then immersed small pieces in a mixture of wax and oil, colored them in carmine, abstracted all the water by absolute alcohol, and made them transparent in oil of cloves. I will show in the course of this treatise that all the parts of the skin participate in this affection, and that the changes admit of a division into two principal groups; first, those of the rete malphigii and the structures connected with it; and second, those of the corium and papillæ.

If the rete malphigii is examined in a patch of skin which by the naked eye and under the microscope appears but little affected, the existence of numerous nucleated cells in the deeper and median strata cannot escape observation, as they are easily recognized by their constricted and irregular form.

Between the cells of the rete malphigii isolated cells with a small nucleus can be observed even in very thin sections, which have been considered as corium cells by Biesiadecki, but which may possibly be identical with those bodies found in contact with the finest nerve fibres.

On examining further in places where the process is more advanced, the thickness of the epidermis is quite striking. The number of binucleated cells is considerable, many of the nuclei appearing constricted and beautifully tinged with the carmine, especially in the deeper layers, where also these cells are unusually small. It is supposed from this, that the rete malphigii hypertrophies, by a continued division of its cells, in the deep and middle strata. But this hypertrophy is by no means general, for we find many patches where the increase of tissue can hardly be said to exist, and in their immediate neighborhood spots, where the rete malphigii dips down between the papillæ similarly changed. This state of the parts supports the view entertained by Auspitz on the subject, that the rete malphigii plays an active part in the alterations of the size of the papillary structure.

The superficial layers of the hypertrophied rete consists of flattened cells, and in many places the border between the scales of the horny layer and the rete is entirely obliterated.

Where the process is very far advanced the horny layer is found more developed than the rete malphigii; the cells of the latter assume, even in the deeper layers, more of the character of flattened elongated scales, with a distinct but compressed nucleus. The same changes are observed in the rete surrounding the openings of the sweat-glands and hair follicles, but *are not confined* to them. The changes then observed in the rete malphigii are the following: In the beginning of the process the cells in the deeper and middle layers increase in number, probably by division of their nuclei and subsequent separation of the cells. By this process a hypertrophy takes place, not only in the rete, but also in the horny layer, as more and more of the superficial layers must assume the horny consistence. Some authors, and among them Biesiadecki, think that the hypertrophy is caused by a transmigration of young cells from the texture of the corium into the rete malphigii, which here remain as epithelial cells, but I am not able to adduce a single fact which would justify such a statement.

In chronic prurigo the cells of even more than the middle layers assume the horny character of those of the epidermis.

HAIR-FOLLICLE AND HAIR.

It is a general impression among dermatologists that in prurigo the hair and its follicle are affected in a very marked degree. The reason essentially is, that prurigo occurs almost solely on hairy places, and that in the centre of each papule a hair is always to be found. How far this is true I am not able to decide; yet, from personal observation, I know that, although very many papules contain a hair in their centre, there are many well-marked pruriginous spots where the microscope reveals but little if any change in the hair and its follicle. It is true there are well-marked changes noticeable in many follicles, but if the process has not very far advanced, their number is very much in the minority, when compared to those which are not affected. With these preliminary remarks I proceed to describe those changes which the follicle with its component parts and the hair present in the various steps of the pathological process.

1. TEXTURE OF FOLLICLE.

The first changes in the texture of the follicle are manifested in those parts lying beneath the insertion of the arrector muscle; consisting in an enlargement and increase in the blood-vessels, which are then easily recognized on the external surface. It is evident from this, that the cells composing the texture of the follicle must now play an active part in the process. These cell-formations, which in a normal patch of skin are only few in number, are increased between the longitudinal fibres of the follicle and in the adjoining portions of the longitudinal fibrous layer. These formations appear either as large, rounded, or irregular protoplastic bodies with one or more nuclei. Among these cells some are readily found provided with little excrescences on their periphery resembling those amœboid migratory cells; or there are small, rounded cells with a nucleus easily colored in carmine. These latter cells by far predominate over the others. Besides these cells some isolated spindle-shaped cells with round or oblong nuclei can be observed. In proportion as the morbid process advances, the greater becomes the number of cells, and especially those last mentioned, so that in chronic prurigo the fibrous texture of the follicle appears very much thickened by bands composed of these spindle-shaped cells, resembling almost exactly newly-formed connective tissue. In the circular stratum of the follicle no other changes are to be observed than that the spindle-shaped cells, which normally compose it, show with greater distinctness; the individual cells appearing as pale and flat spindles with a compressed and rod-like nucleus, and the whole stratum as identical with a membrane consisting of unstriated muscular fibre.

The arrector muscle is much more developed in those portions of hair where the morbid process has far advanced, increasing in breadth to almost double its size; but besides this, its component elements are more distinct and appear longer than in the normal state; this is probably explained by the fact that its straight direction is impeded, and it becomes more or less tortuous in its course towards the epidermis.

2. THE OUTER ROOT-SHEATH.

This appears in the neighborhood of the insertion of the arrector muscle thickened and hypertrophied, the outer layers adjoining the vitreous membrane being lined by pavement epithelium and each cell provided with an oval nucleus; the inner layers consist of cells polyhedrical in form with a tendency to become flattened and indistinct as they approach the external surface. Among the outer cell layers, cells with two nuclei or with one constricted in the centre, can be readily observed. A very remarkable fact in connection with this outer root-sheath was already observed by Newman and Derby, namely, oval and semicircular protrusions of the sheath at the spot corresponding to the insertion of the arrector muscle and above it, simple and lobulated in shape, and appearing the larger the more the sheath was developed. These protrusions commence either by a very broad base from the root-sheath or are connected to it by a cellular pedicle; in this case they are found imbedded between the elements of the muscle and deeply in the texture of the corium.

These protrusions are undoubtedly the result of proliferation of the cells of the sheath; for the existence of cells with a constricted and double nucleus and the abnormal thickening of the sheath itself show that the cell-elements undergo a morbid increase; furthermore, if it be considered that the follicle is fixed at the fundus and its opening, that also the inner root-sheath and the hair itself are capable of resisting the pressure from without, it is evident that these protrusions can only take place externally and at the points indicated.

That this protrusion most commonly occurs at the insertion of the arrector muscle is readily explained by the relations which the blood-vessels have to the part. But it cannot be denied that, as Derby supposes, the increased contractile power of the hypertrophied muscle materially aids in the formation of these protrusions; but that this is not the only means is proved by the existence of these protrusions at a point distant from the insertion and usually superficially to it.

The ultimate anatomical structure of these protrusions does not differ materially from that of the external root-sheaths. Like the latter, they contain cells with a double and constricted nucleus; the outer layer is composed of columnar epithelium, with oval nuclei, and toward the interior, of polyhedral cells. In the axis of the cord which connects the protruded part to the sheath, spindle cells with oblong nuclei are found. These cells, which run in the long axis of the pedicle, are in direct communication with the spindle cells in the root of the hair; and the same also can be directly traced to similar cells found in two or three rows and surrounding a circular space which lies in the centre of the protruded part. This space, although not constant, is, in all cases where it exists, surrounded by spindle-shaped and flattened cells, which at times become indistinct by running into one another like the cells found in the interior of the sheath.

The interior of the space differs considerably in these protrusions; some contain no plastic elements, but a fine granular mass, others young nucleated, also rounded or polyhedral in form, occurring only where the protrusions are small, so that this condition appears to be peculiar to the early stage of the disease; others, again, contain horny scales in concentric layers.

I could not, even after careful examination, come to any definite conclusion as to the cause of these spaces. Derby's assumption, that this is essentially a cyst lying in the protruded part, does not apply to all cases; but on the contrary, from the manner in which these spindle-shaped cells are connected with the surrounding structures, it appears to me very probable that we have to deal here with a rudimentary and newly-formed hair-follicle. It remains still to mention those changes in the sheath between the external opening of the follicle and the protrusion, as it is found in the numerous preparations taken from the anterior surface of the tibia, where the epidermis is so far changed, that down to its deepest layers it consists of nothing but compressed, horny scales; there the root-sheath has become thinner, especially that portion of it which applies itself to the rete malphigii, and its elements no longer present the appearance of young cells developed from a granular protoplastic material, but horny and closely-set scales are found here with flat and rather indistinct nuclei.

3. PAPILLA, INNER ROOT-SHEATH, AND HAIR.

In a case not far advanced, the papilla, the inner root-sheath, and the bulb of the hair are found hypertrophied. The vessels of the papilla are enlarged, its texture and that of the bulb are found filled with small round cells, with one or two nuclei. The inner root-sheath is broader than normally, and its cells are spindle-shaped; and that portion of the hair adjoining the bulb has a distinctly fibrous texture.

In far advanced prurigo the hair, with its inner root-sheath, is almost in its whole extent separated from the follicle, and completely so from the papilla and from the upper part of the external sheath, while this is completely separated below, as the hair is in those spots, where the external sheath protrudes, closely applied to it by its internal sheath, so that the line between the two becomes effaced. The papilla consists almost wholly of dense bands of the spindle-shaped elements. The detached bulb presents numerous spaces, marked by a distinct membrane. Judging from their form and position, these membranes probably represent the débris of cells belonging to the bulb.

The inner root-sheath is closely applied to the hair, and as already mentioned, lifted off from the outer root-sheath.

In the more superficial portions above the protrusions, the inner root-sheath appears on a longitudinal section as an unusually broad and quite homogeneous band, which, towards the opening of the follicle, appears lacerated, until it ends abruptly. In the same way the hair is quite homogeneous in texture, and terminates already below the neck of the follicle by a pointed extremity.

Whether this condition of the inner sheath is the result of the death of these parts, or whether, after their complete separation from the upper part of the external sheath, they were torn off by the scratching of the patient, cannot, of course, be accurately decided; the latter is certainly more probable, for it is well known that the naked eye will only detect very little hair in places where the patient is constantly scratching. If we review the facts ascertained in connection with the diseased follicle and the hair, we find the following:

The fibrous layer of the follicle, especially at the fundus, contains enlarged blood-vessels.

In the beginning of the affection only a few spindle-shaped, but mostly round cells, are found; as the disease advances, the spindle-shaped cells predominate and form bands by which the texture is thickened.

The elements in the circular fibrous stratum become more distinct, but no further changes exist in the texture of the follicle.

The cells in the lower part of the external root-sheath are increased by proliferation, and thereby produce a thickening and protruding in isolated spots, especially in the region of insertion of the arrector muscle, but also above and below it, assuming a more or less oval and rounded form, and composed of the same cell-elements as the external sheath itself. These protrusions are attached to the follicle by a broad base or are connected to it by a cellular pedicle. This protrusion is always in relation externally with the texture of the follicle.

In those protrusions connected to the sheath by a pedicle, spaces are found surrounded by spindle-shaped cells, which probably represent the rudiment of a new-formed follicle. In chronic prurigo the upper half of the external root-sheath dwindles down, its cells becoming horny.

The papilla and bulb become enlarged by new-formed cells; the inner root-sheath becomes hypertrophic, and the hair distinctly fibrous. As the process advances the bulb separates from the papilla; the hair with its sheath separating entirely above from the outer sheath, and is completely below. In many places of inveterate prurigo the upper part of the hair with its inner sheath is observed to be torn off.

4. SEBACEOUS GLANDS.

In places where the upper part of the external sheath was horny, and where the hairs were torn off, these glands were also found diminished in size and the cells of their excretory ducts more or less horny. I have nothing to say in regard to changes in these glands at the beginning of the process.

5. THE SWEAT-GLANDS.

The changes are much more marked in these glands and their excretory ducts. The first thing that strikes us is the change in the epidermis lining these ducts; instead of being cylindrical or cuboid in form, several rows of very small cells are found. In several sections of these ducts while imbedded in the texture of the corium I counted as many as four rows of such cells.

In the innermost row there was always a thick and lustrous space observable, which appeared continuous throughout the row, resembling very much the border of the epithelial cells in the villi of the intestines.

Where the disease has far advanced, the duct is enlarged and the cells found exfoliated from the basement membrane. Exactly the same appearance is presented by the canal composing the gland; the walls of the latter containing small, round, and some branched cells very easily colored by carmine. In the interior of the canal no space can be observed as in the secretory duct, it is completely filled by the cells just described. There can be no doubt that we have here also to deal with a proliferation of the glandular cells. The vessels surrounding the gland are considerably enlarged, and the texture in which these glands are imbedded contains between its fibres a great number of these cell-formations, which will now be more minutely described in connection with the texture of the corium.

THE TEXTURE OF CORIUM.

I now pass to the last and most important element of the skin, which I had occasion to examine, that is, the corium and the papillæ. As in the rete malphigii a peculiar condition can be demonstrated in the papillary texture from the numerous instances where the latter was evidently involved; without any changes existing at the time in the rete malphigii, I am led to infer that they precede the latter. The first changes in the papillary texture consist in an enlargement of the blood-vessels and in the great distinctness of the normal cells; numerous branched cells are there seen beside many small round migratory cells, with one or two small but well-defined nuclei; also some large cells with several nuclei are among them; the more the process advances, the more is the fibrous texture of the papilla pushed away by the increasing cell-formations, and the greater is the distension of the papillæ in both its transverse and longitudinal diameter. When the process has already far advanced, whole bundles of spindle-like cells are seen among a few cells so connected as to form a loose network shooting up almost vertically towards the epidermis, and closely resembling new-formed connective tissue. It must be emphatically stated that even in this stage and in those places where the cells in the rete malphigii are considerably increased, and the texture of the papilla filled with cells, a sharp outline exists between the rete and the corium.

Together with the steady progress of the morbid action, the deep structures of the corium become implicated. Everywhere where capillary networks exist, as around the sebaceous glands, the follicle and the sweat-glands, it can be demonstrated that the very first step in the changes is an enlargement in the blood-vessels and an increase in the cell elements of the texture. Later on, the texture around the vessels becomes filled with a great number of cells—some large and irregular, some with several nuclei and others small and rounded, with a single nucleus. But also around the smaller veins and arteries the same process takes place, so that in very many situations the whole texture shows nothing but vessels and cell-elements, between which a fine fibrous network appears. In the chronic form the texture of the corium contains also in its deepest layers, besides those elements just described, numerous bands of spindle-shaped elements and quite extensive nets of branching cells. The texture of the larger vessels, also, is filled with these cell-elements, mostly spindle-shaped, also some round cells with one or two nuclei; the walls of the vessels therefore appear hypertrophied, especially at their outer parts.

Besides these places in the texture of the corium filled with vessels and cells, no empty spaces or fissures could be detected that might have been surrounded only by some fibrous tissue, and containing here and there a corpuscle.

The result, then, of my examination is briefly this: The pruriginous process begins in the papillæ of the corium, its texture becoming considerably richer in cells, and its vessels enlarged.

Neumann's view, according to which the prurigo efflorescences are caused by accumulation of young cells, and by a fluid exudation, in the texture of the papilla, appears to me under these circumstances much more plausible than Hebra's, who considers the deep layers of the epidermis to be the seat of an exudation which lifts up the superficial strata, and in this manner causes the prurigo papules.

Next is the rete malphigii, which becomes affected in the manner that the cells of the deeper, and to some extent also the middle layers, which proliferate, and numerous small cells are met with which probably originate by a segmentation of others. The fact that numerous cells exist which have a double, or at least constricted nucleus, is in favor of this view. By new formation of cells in its deeper layers the rete malphigii becomes hypertrophied, and the stratum corium also gains in thickness, as the most superficial layers of the rete turn into horny scales. Cotemporaneously with this process we observe a cell proliferation in the fundus of the hair-follicle in the outer root-sheath, the hair-papilla and the hair-bulb.

The texture of the follicle is thickened first by rounded, later by spindle-shaped cells, and appears hypertrophic, especially at the fundus; as here, on account of the great vascularity, the cell proliferation is most considerable. The cell-increase in the outer root-sheath is only confined to certain spots, most generally to the insertion of the arrector pili muscle, which becomes enlarged. This cell increase causes greater or smaller protrusions, which present the same elements as the outer root-sheaths, and are connected with it either by a broad base or a cellular pedicle.

In the latter case these protrusions sometimes include a space which is probably identical with a rudimentary follicle. In chronic prurigo the hair is frequently found with its inner sheath torn off at the upper part of the outer sheath, except in those places where the latter has formed protrusions.

The sweat-glands participate in the process in a very marked degree; the cells of the excretory duct and glandular canal are cast off from the walls; at the same time numerous small, round and branching cells are observed in their walls. By the advancing morbid process all the parts of the corium are changed like those in the papillary texture at the beginning of the process; the vessels are enlarged, the texture filled with numerous cell formations; these are either small, round cells easily tinged in carmine, or large, irregular migratory cells filled with one or more constricted nuclei, nets of branching cells, and in the chronic form whole tracts of spindle-cells; in the latter case the blood-vessels present in their coats a considerable cell increase.

Epitome of Current Literature.

Diagnosis by Examination of Urine in Obscure Forms of Urinary Disease.—Sir Henry Thompson describes a simple procedure by which he obtains specimens of urine free from any admixtures which are formed in the bladder, and thus can determine whether or not albumen in the fluid is due to disease of the kidneys or some other part of the urinary track. He proceeds in the following manner: A No. 6 or 7 flexible catheter is introduced into the bladder while the patient is in an upright position, and the urine which is drawn is placed in a vessel apart, and will serve as a standard of comparison. The bladder is then washed out two or three times, using each time about one or two ounces of water, until the outflowing fluid is perfectly clear. The catheter being *in situ*, fresh urine very soon escapes, which can be taken as a true specimen. Mr. Thompson suggests that there is a liability to error sometimes, but rarely, in these cases, and that is when the bladder bleeds easily upon the contact of instruments. Mr. T. remarks that it is well to bear in mind the fact that upon applying the tests to equal parts of blood and pus, the former yields a more bulky deposit of albumen, and that the disposition to bleeding is indicative of vesical rather than renal lesion.—*British Medical Journal*, January 7, 1871.

Incontinence as a Symptom of Retention.—Mr. Jonathan Hutchinson again calls attention to the fact that incontinence is sometimes the first symptom of retention, without the patient being conscious of any distention. Mr. Hutchinson thinks that this symptom rarely occurs in cases of organic stricture, but oftener occurs in enlarged prostate, and may occur after damage to the perineum, with rupture of the urethra and resulting cicatricial stricture. He details the case of a young man who suffered from great difficulty of urination and incontinence. Four years before he had had gonorrhœa, which lasted several months, and only for the last year had experienced any difficulty in passing his water, the act being attended with a forcing pain in the abdomen, and the stream being small and twisted. He also complained of a continuous uncomfortable pain in the abdomen and aching in his back, and said that he was so weak and nervous at times that he could not attend to business. During the last two months he had had several attacks of incontinence, occurring sometimes during sleep, and sometimes while walking.

When first seen his bladder was full, and after an unsuccessful attempt at catheterism he voided two pints of water in a larger stream than he had been accustomed to for a month. Mr. Hutchinson's interpretation of the man's symptoms was, that the bladder was habitually distended with a considerable quantity of urine, which gave him discomfort, and perhaps had already induced renal mischief. He refers to a case in which fatal disorganization of the kidney was thus induced, and to the fact that incontinence as a symptom is apt to be very misleading to the patient, who, seeing the flow of urine, does not entertain any idea of its accumulation.—*British Med. Journal*, Jan. 21, 1871.

Reflex Neuralgias Symptomatic of Blennorrhagic Orchi-epididymitis.—Dr. C. Mauriac, physician to the Hôpital du Midi, thinks that these neuralgias are produced by morbid impression transmitted either from an orchi-epididymitis, a vaginalitis, or an inflammation of the cord. This impression is conducted to the nervous centers, where it modifies the physiological action of the nerve-cells, from which it results that the sensitive nerves having their origin at this spot transmit painful sensations which of themselves can become the foci of reflex actions. The neuralgias are: 1, rachialgia; 2, lumbo-abdominal neuralgia; 3, crural and sciatic neuralgia; 4, renal, hypogastric, and epigastric neuralgias. The neuralgia of the testes or irritable testis is often simply an inflammatory affection localized in the testicular apparatus, which has become chronic and passed unrecognized, and which may be the starting-point of reflex neuralgias. Inflammation of the testicle and its appendages has the remarkable property of rapidly diminishing the quantity of red blood corpuscles, and to a more marked degree if the patient is young.—*Gazette Médicale de Paris*, 1869 and 1870; *Lyon Médicale*, August, 1870.

Erysipelas of the Face in Intermittent Fever.—This complication has been observed thirty-four times at Anvers by Dr. Devancleroy, who considers the erysipelas as a manifestation of the malarial poisoning, and that far from constituting a well-determined morbid entity, it should be regarded as a secondary symptom which is due to a number of circumstances, such as digestive derangement, scrofulous and rheumatic diathesis, puerperal and nosocomial influences, and the worst stages of the adynamic fevers. The erythematous and bullous forms were those which were observed. In most of the cases the eruption appeared at the declining stage of the fever, at others it was ushered in by the usual symptoms of ague, which observed a distinct periodic character which was chiefly quotidian and also tertian. Enlargement of the spleen also exceptionally was noticed. The remedies found useful were first quinine, which the author thinks simply cures the malarious element, and also an infusion of century, which is thought to have decided antiperiodic properties.—*Arch. Méd. Belge*, June, 1870; *Lyon Médicale*, August, 1870.

Exaggerated Irritability of the Muscular Structures of the Skin.—Dr. W. H. Broadbent reports the case of a man who, being weak and debilitated from a transient thoracic difficulty, had an eruption upon his chest resembling herpes zoster, commencing in the region of the cervical plexus. One patch was larger than the rest, and upon it was an urticaria-wheal. The back of the finger nail was sharply drawn across the chest, producing the appearance of goose-flesh. This disappeared in a few minutes, and was followed by a similar line of hair-roots, this time of a red color; then the redness disappeared, and a typical pale strip of urticaria, with pale summit and red border, was observed; this, again, disappeared in ten minutes. Dr. B. suggests the probability of an association of bastard zoster with urticaria. He calls attention to the difference in the phenomena thus presented and those observed when an unirritable skin is thus irritated. The first phenomena there observed is a pale line which disappears immediately and completely, and is followed by a red line in a broader pale track; the red line then fades, and the broad pale line remains for a little time. Dr. B. thinks the pale line is due to the compression of the cutaneous capillaries by the dermal muscles rather than to the inherent contraction of the capillary walls.—*British Medical Journal*, April 29, 1871.

Vegetable Parasites of the Skin.—Dr. Davidson, in a paper upon this subject read before the Microscopical Section of the Liverpool Medical Institution, stated that the four following theories were entertained of these fungi:

1. That the appearances described are not vegetable at all, but merely degenerations of the natural structures of the skin.
2. That the fungi are not the cause of the skin-disease, but merely secondary to disease already existing.
3. That there is only one fungus; the same in all forms of skin-disease.
4. That there are several kinds of fungus, each giving rise to its own disease.

He showed that the first and second were disproved by the mode of origin and course of the diseases, and by the microscopical appearances. Although he was in favor of the theory that each disease had its own fungus, he acknowledged that it could not be positively determined.—*Liverpool Medical and Surgical Reports*, October, 1870.

The Communicability of Syphilis by Vaccination.—Köbner states, as the result of numerous experiments, where inoculation was effected by fluids containing the syphilitic virus in a very diluted state (as, for example, the blood in certain periods of constitutional syphilis), that the *quantity* used is a factor of great importance in the solution of the problem. The attempts at inoculation made by Waller, Pellizari, Thiry, and the anonymous surgeon of the Palatinate, were always negative when the experimenters trusted to small scratches with the lancet, and successful only when a *large* quantity of syphilitic blood was brought in contact with extensive absorbing surfaces, produced by vesication or by cut cups. It is therefore impossible, argues Rahmer, that the minimum amount of blood which may be mixed with the vaccine lymph should be, as Viennois stated in 1860, the only vehicle by means of which syphilis can be communicated by vaccination. Again, the small number of successful inoculations by means of syphilitic blood, as compared with the frequency of the cases when the disease follows vaccination from the arm of a person afflicted with syphilis, is a powerful argument against the theory that the blood is the only carrier of the poison. According to the statistics published by Roberts, based on nineteen inoculations with syphilitic blood, the disease followed vaccination from infants affected with syphilis into 66 per cent., while the inoculations succeeded only in 26 per cent.

According to the experiments of Schreier and others, syphilis cannot be communicated by means of the clear, unmixed vaccine lymph taken from the arm of a child known to have constitutional syphilis; nor is this possible, as Boeck has shown by his inoculations, even of lymph mixed with blood which is taken from the vaccine vesicle of a syphilitic child, unless the blood is present in larger quantity than is usually the case in vaccination. Hence, according to Köbner, we must seek another vehicle, and this is the secretion of a local syphilitic affection, which has its seat in the basis of the pseudo-vaccine pustule. This may present itself either in the form of an ulceration or commencing induration, dating back only to the time of vaccination, or it may be an infiltration, which is a local manifestation of constitutional syphilis which has already existed some time. For instance, if a child with latent hereditary syphilis, or, it may be, manifest constitutional syphilis, is vaccinated, we find that after a few days a syphilitic infiltration takes place around the vaccine vesicle, which itself follows a perfectly normal development. If the lymph from this vesicle be used in vaccinating another child, and, through carelessness, the product of the syphilitic infiltration also be conveyed on the point of the lancet, the disease will certainly be communicated to the healthy child, and we will have a specific ulcer developed at the place of inoculation, either at once, on the eighth or tenth day, or subsequently, in the cicatrix itself. As a rule, the vaccine pustule has a normal appearance on the eighth or tenth day after vaccination, and the first symptoms of constitutional syphilis appear from four to eight weeks later. The supposition of so rapid a manifestation of constitutional syphilis after vaccination is at variance with the opinions of former observers, who have described a period of incubation lasting several weeks; it is, however, in strict accordance with the experiments of Köbner and Bidencap, which show that the inoculation of the secretions of the products of secondary syphilis may produce pustules, and subsequently ulcers, in a space of time varying from forty-eight to seventy-two hours. Bohn, from whose review of Rahmer's thesis this abstract is taken, urges the necessity of a stringent adherence to these rules: 1. That the pure, clear lymph should alone be used; 2. That this should be taken from children who are at least from three to six months old, since by this time hereditary syphilis, if present, will certainly have manifested itself.—*Inaug. Dissert.* by A. Rahmer, Berlin, 1869; *Am. Med. Times.*

Addison's Disease and Scleroderma.—Dr. J. M. Rossbach, of Würzburg, relates a case of the coexistence of these two diseases in the same patient, but during life the symptoms of Addison's disease were the more prominent. There was no disease of the supra-renal capsules discovered after death. The state of the skin termed scleroderma existed in this case mostly on the extremities, and consisted in the conversion of the subcutaneous adipose tissue into firm connective tissue, with hypertrophy of the smooth muscular elements of the skin. The pigmentation of the skin presented some marked peculiarities. In the greater number of recorded cases of scleroderma there has been no pigmentation, and where it did exist, the color was more of a brown, or yellowish-brown, than the deep bronze of Addison's disease. In the author's case, the color, where it existed, was very intense, but it was almost entirely absent in the parts where the scleroderma was present, so that in respect to pigmentation the skin exhibited the peculiarities of both diseases. Again, the usual seat of increase of pigment is the rete mucosum, forming a simple increase or hyperplasia of the pre-existing pigment; in some cases, however, it has been observed to a less extent in the cutis itself; but in the case related, the pigment not only existed in the cutis, but was greater in amount there than in the rete mucosum, being especially developed around the sweat-glands. The subject will be concluded in a subsequent paper.—*Virchow's Archives.*

Clinical Observations on Xanthelasma Palpebrarum.—Mr. Jonathan Hutchinson read a paper upon this subject at a recent meeting of the Medical and Chirurgical Society of London. He stated that his paper concerned the buff or yellow patches not very unfrequently seen near the inner angles of the eyelids, which had been described by Dr. Addison under the name of vitiligoidea plana, and which had been accurately figured by Mr. Wilson, Hebra, and several other authorities. He preferred Mr. Wilson's name because it had reference simply to the very conspicuous color of the patches, and to their location; and because it involved no suggestion of similarity or relationship to any other malady. For some years the author had been engaged in collecting facts as to the clinical meaning of these curious patches, in the hope of finding that their presence might furnish a clue to their possessor's diathesis or state of health. More especially he had wished to investigate the correctness of Dr. Addison's belief (found on but very few cases) that they were usually associated with disease of the liver. The paper was based upon the narrative of about thirty cases, and was illustrated by a series of colored drawings. The chief conclusions arrived at are summed up in the following propositions: 1. That xanthelasma never occurs in children, while it is fairly common in middle and senile periods of life. 2. That, in a large majority of cases, its subject is not seriously ill, nor in any danger of becoming so. 3. That, in a small portion of very severe cases, jaundice, with great enlargement of the liver, are met with. 4. That, when jaundice occurs, it almost always precedes the xanthelasmic patches. 5. That the form of jaundice is peculiar, the skin becoming of an olive-brown, or almost black tint rather than yellow, and the color being remarkable for its long persistence. 6. That the enlargement of the liver may be very great, and that it may subside, and the patient regain good health. 7. That in many cases in which there has been no jaundice, there is yet the history of frequent and severe attacks of functional disturbances of the liver. 8. That xanthelasma occurs more frequently in females than in males, the proportion being two to one. 9. That in all cases the xanthelasmic patches appear in the eye-lids first; and that in not more than about eight per cent. do they ever extend to other parts. 10. That the patches invariably begin near the *inner* canthus, and almost invariably on the *left* side. 11. That xanthelasmic patches are of little value for purposes of prognosis, being usually the evidences of past rather than of coming disease. 12. That it seems not improbable that they may result from any cause which has induced repeated changes in the nutrition, and especially in the pigmentation of the skin of the eyelids. Thus they occur to those who have been liable to have dark areolæ round the eyes, whether from "sick headaches," ovarian disturbance, nervous fatigue, pregnancy, or from any other cause. Hence their frequency in bilious "subjects," and in the female sex. 13. That it is probable that of the causes mentioned under which the pigmentation of the eyelids may be disturbed, disorder of the liver is the most powerful; hence the fact that the more extensive cases are usually associated with hepatic disease. The author stated, amongst other points, that when these patches are seen on the eyelids, it is usually safe to suggest that their possessor has been the subject, at some period of life, of very severe and frequent sick headaches, and that in two-thirds of the cases this suggestion would be confirmed.—*Medical Times and Gazette*, *Feb.* 1871.

Therapeutical Notes.

Treatment of Syphilis.—Dr. McCall Anderson thinks that mercury is invaluable in syphilis, as observed in its rapid action upon its cutaneous manifestations. Dr. Anderson gives the following indications for its administration, and states that while it is not necessary to produce salivation, it is necessary to bring the patient under its influence:

1. In cases of syphilides in persons of sound constitution.
2. When some delicate organ, such as the eye, is also attacked.
3. In persons of sound constitution with chronic circumscribed eruptions which have resisted external remedies and iodide of potassium in large doses.

Dr. A. has used the subcutaneous method with good results. He uses a solution of four grains of the bichloride in an ounce of water, and of this injects either seven and half minims ($\frac{1}{16}$ grain), or fifteen minims ($\frac{1}{8}$ grain), once daily. He prefers parts of the body which are least sensitive and not exposed to pressure. He thinks that the advantages of this treatment are: 1st, precision of dose; 2d, absence of any gastric disturbance; 3d, smallness of dose; 4th, greater rapidity of action; 5th, salivation is not produced although stomatitis may be. He thinks this plan has the following disadvantages: 1st, pain of the puncture sometimes prolonged; 2d, objections of patient; 3d, production of abscess, once in two hundred injections. Dr. A. also approves of the mercurial vapor bath, especially in syphilitic ulceration of the skin and in the syphilides of cachectic patients. Though he does not regard it as the most effectual, he thinks it is the safest mode of bringing the patient under the influence of mercury. In the eruptions of hereditary syphilis, Dr. A. thinks mercury curative if it is used before the poison has produced a profound cachexia, and in these cases he thinks it is necessary. He prefers inunction as the mode of administration in these cases, either rubbed into the skin or applied as a girdle around the body. Should an erythema be produced, it is necessary to start again upon some other part of the body.—*Lancet*, June 18, 1870.

Hypodermic Injection of the Bichloride of Mercury in Syphilis.—Dr. T. J. Walker states that he has treated ten cases by this method, and found immediate benefit after one or two injections. One case after being treated three weeks, was very much improved, and had only required seven-tenths of a grain of the bichloride. Another case was relieved of its secondary symptoms by six injections, and its tertiary manifestations were relieved by a combination of internal treatment by iodide of potassium and by injections. In tertiary syphilis Dr. W. thinks that the injections are not as efficacious as the iodide of potassium. A case of iritis was relieved by three-tenths of a grain. Dr. W. employed a solution of one-thirtieth of a grain of the bichloride in ten drops of water and glycerine. He states that the pain and inflammation at the punctured point is slight, and that the success of the treatment warrants its trial in large institutions.—*British Medical Journal.*

Treatment of Syphilis by Hypodermic Injections.—Professor Thiry, of Brussels, after a careful trial of this method, has arrived at the following conclusions: 1. Mercury acts neither better nor more rapidly than when administered by other methods. 2. Individuals are not guaranteed by it from the various accidents ensuing from the use of mercury, especially salivation. 3. It induces accidents proper to itself, such as suppuration and fever, which may be attended by serious effects. By the continuance of its application it induces a constitutional debility and an impoverishment of blood not observed under ordinary treatment, the immediate result of the latter being, that while the syphilitic poison is destroyed the system is invigorated. 4. The number of injections may have to be very numerous, proportionately to the period and intensity of the disease, so that for the action of mercury to be sustained, they may have to be continued at short intervals for months. This is a dangerous practice, and the patient who is the subject of this lecture, although thirty-two injections had been given, was at the time the subject of well-marked relapsing syphilis. 5. All cases that have been treated at St. Pierre furnish a similar result, for in all relapses have taken place. The injections at first seem to produce excellent results; but in proportion as they are multiplied such effects diminish and disappear in consequence of the disorders they give rise to. 6. In fine, these injections cannot replace either the internal or epidermic employment of mercury which constitutes the most certain method of treating syphilis, while they give rise to far greater inconveniences. Their effect is very uncertain, but they are capable of being employed as an auxiliary under certain circumstances as in infantile syphilis, and when mercury is not otherwise tolerated. Also in some cases of inveterate syphilis they may be used in combination with other methods of treatment.—*Med. Times and Gazette*, June, 1870.

Treatment of Syphilis by Mercury.—M. Gubler made some remarks upon this subject before the Sociéte de Thérapeutique. He thinks that it is necessary to remember that there are different indications for the treatment of the manifestations of syphilis to that of the diathesis. Mercury will cure the former, but not the latter. He instances two cases in which mercury removed the manifestations, but as they again recurred periodically, he insists on the fact that the diathesis was unaffected. He does not think that mercury is a powerless agent, and that although it does not destroy syphilis it will cause the disappearance of its manifestations, or, at least, render them lighter.—*Gazette Médicale de Paris*, June, 1870.

On the Influence of Iodide of Potassium upon the Salts of Mercury in Presence of Organic Substances.—Mr. G. E. Walker thinks that when mercury is given in such a way as to "affect the system, there is no certainty as to the prevention of cumulation or poisonous effects." This, however, can be well determined by combining iodide of potassium with the mercurial, which prevents its precipitation by the albumen of the tissues, and which would dissolve a mercurial salt even if it had been reduced in the economy from the condition of a peroxide to that of a suboxide, in which latter condition it might accumulate. He instanced cases in which a long-continued course had not produced a deleterious effect. He also thinks that in this form mercury may be useful in cases where the inflammatory products are not of syphilitic origin. He thinks, also, that mercury is excreted by the kidneys together with the iodide of potassium.—*Liverpool Med. and Surgical Reports*, 1870.

Treatment of Circumscribed Ulcerating Syphilides by Emplastrum de Vigo.—M. Constantin Paul, in a paper read before the Therapeutical Society of Paris, stated that he thought it was necessary to seek for a remedy for each lesion of syphilis individually rather than a remedy for the general disease. He had treated thirteen cases of ulcerating syphilides with emplastrum de Vigo, and had obtained good results. The average length of time necessary for the healing of the ulcers was five weeks, but some were healed in a shorter time, while others required two months. He thinks that this treatment is beneficial, as it brings mercury in direct contact with the ulcers, and that it is easy of application and inexpensive. He applies the plaster twice a day, after washing the ulcer with aromatic wine. He states that M. Bazin has also used this plaster in his service, and has obtained good results.—*Gazette des Hôpitaux*, September, 1870.

The Treatment of Stricture.—Mr. W. F. Teevan, in a paper read before the Medical Society of London, defined stricture to be "any diminution of natural calibre of the urethra, resulting from the contraction of organized lymph," and stated that it embraced all stages of its development. He called attention to an error often committed by surgeons in pronouncing a patient to be free from stricture into whose bladder a No. 10 English instrument could be passed, and urged the employment of the *bougie-a-boule* as a means of ascertaining slight contractions which are so commonly the cause of gleet, and which are the forerunners of stricture. He divides strictures into subpubic, penile, and orificial, and thinks that the subdivision of the subpubic form into membranous, and bulbous, is not warranted by facts. He computes the occurrence of strictures in the ratio of 80 per cent. for the subpubic variety, 18 for the penile, and 2 for the orificial form. His divisions depending upon conformation as decided by the impressions given to the *bougie-a-boule* are the tunnel and ring strictures. He thought that in order to be perfect all methods of treatment should have as their object the restoration of the full, natural calibre of the urethra, and stated that all operative procedures were usually preceded, and always followed, by gradual dilatation, hence, that no incising or rupturing instrument would take the place of the bougie, but that the latter could take the place of the former. He thought that any stricture which showed a tendency to recontract after dilatation should be incised, and that any stricture through which an instrument could not be passed should be treated by external urethrotomy without the guide. The discussion which follows gives us the opinions of other prominent surgeons upon this subject. Mr. McCormac preferred gradual dilatation, and thought that if strictures were diagnosticated at their earliest stage no operation would be necessary. Mr. Gant preferred gradual dilatation, and, exceptionally, the dilator. Mr. Davy urged the use of the *bougie-a-boule* in every case of gleet, and preferred forcible rupture in the latter procedure. Mr. J. D. Hill always employed, and had had two deaths from it. Mr. Henry Smith thought that forcible rupture was objectionable as being dangerous to life, and that strictures thus treated contracted rapidly. He preferred gradual dilatation, as being harmless and productive of excellent results.—*Medical Times and Gazette*, March 25, 1871.

Stricture of the Urethra Treated by Opening its Mem-

branous Portion.—Dr. S. W. Gross advocates this procedure in preference to internal urethrotomy or vesical puncture; he is opposed to the practice of making incisions into the scrotal portion of the urethra and the portion anterior to it, as the former operation is often attended with infiltration, and the latter incision does not close readily. In cases of stricture in these regions, as well as those in the perineal urethra, he prefers to open the membranous urethra, and thus empty the bladder. He thinks that the operation is safely and expeditiously done by a person familiar with the anatomy of the parts, and that it is not attended with any bad results. In the performance of the operation, the patient is placed in the usual position for lithotomy, while the surgeon, seated in front upon a low stool, inserts his left index finger with its palmar surface upwards into the anus, effacing as he enters the bulge of the rectum by pushing it back with his finger-nail, until he reaches the apex of the prostate. The point of a long straight bistoury is then introduced with the cutting edge upwards on the raphe five lines in front of the anal margin, and pushed backwards until it reaches the finger. The knife is then carried upwards dividing the superficial structures exactly in the median line for about an inch. Urine flows when the incision is made into the membranous portion, and a catheter is then to be introduced and the balance drawn off. The only structures liable to be wounded are the rectum and the bulb; the former can be avoided by carefully carrying its anterior wall backwards and by keeping the dull edge of the knife towards it, or by using a curved knife; the latter may be avoided by making the upward incision as small as possible; but if it is wounded it can be readily controlled. When the incision commences an inch anterior to the anus and is prolonged for an inch the bulb is necessarily wounded, so that operating within this space will avoid it. Dr. G. thinks that the fixed and invariable position of the membranous urethra and its frequent distention in cases of stricture are important guides in the operation. In a case operated upon by Dr. Gross—the first, he thinks, in this country (the operation having been done in England by Sir Charles Bell and Mr. Arnott)—the urine for the first few days escaped through the wound involuntarily; on the twenty-eighth day a few drops escaped through the meatus, and the perineal wound healed in a little over a month. The operation is performed in what is called the recto-urethral triangle, and a vertical section in the median line of a recent pelvis shows the prostate within one line of the anterior rectal wall, which viscus at the summit of the gland turns slightly backwards to end at the anus. The posterior wall of the triangle is formed by the bowel, and it is necessary to remember that it becomes dilated above the sphincters and rises at least half an inch above the dependent anus. The anterior boundary of the space is formed by the membranous urethra which curves forwards as it is overlapped by the bulb, while the base of the triangle is at the surface and apex of the prostate, and the incision is carried through the soft parts of this space. Dr. G. gives the following measurements: The distance between the verge of the anus and the bulb is four-fifths of an inch, while the rectum is one-half that distance. The membranous urethra is situated ten lines in front of the rectum and sixteen lines above the anus, and the antero-posterior diameter of the space, or the distance between the apex of the prostate and integument, is about twenty lines.—*Medical Times*, November 15, 1870.

Stricture of the Urethra.—Mr. E. W. Stokes, Jr., makes the following remarks upon the treatment of stricture. He says: "There can be no doubt that, although the treatment by gradual dilatation is the slowest, it is unquestionably the surest and safest method, and one which, judiciously carried out in practiced hands, is least likely to be followed by relapse. I am not one of those who hold that urethral stricture is an incurable affection; for I have had occasion to observe some cases, though I admit they are exceptional, in which, after a lapse of years from the time of treatment, there was no sign or symptom of any recontraction. But these cases were treated solely by the gradual dilatation method, and their non-recurrence, I think, can be accounted for by the probable absorption of the deposit causing the contraction, which absorption is produced, or, at all events, facilitated, by the presence of the bougies or catheters which the surgeon may employ." He thinks that the surgeon should be guided by the following principles: "First, that all cases in which it is possible to introduce a catheter or bougie should be treated by the method of gradual dilatation, as it is the safest and most effectual. Second, that strictures which are impermeable to catheters should be treated by internal urethrotomy; and thirdly, that strictures which are impermeable to any catheters or bougies should be treated by external urethrotomy!" —*Dublin Quarterly Journal of Med. Sciences*, February, 1871.

Radical Cure of Hydrocele by the Seton.—Mr. Henry Smith calls attention to the ancient practice of Pott as having been attended with good success in his hands: in about thirty cases only two suffering from acute inflammation following the operation, in one of which it resulted from taking a long walk immediately afterwards. Pott's treatment consisted in the introduction of "ten or twelve strings of candle-wick cotton" after the withdrawal of the fluid by the trocar. The patient was then put to bed and purged. Mr. Smith considers this plan as unnecessarily severe, and the mode he adopts is simply to puncture the tumor with a common suture needle, armed with a single thread, and, having brought the thread out at a distance of one or two inches from the point of entrance, it is disengaged from the needle and the two ends are lightly tied together. He does not tap the hydrocele first, as Pott recommended, for if a pretty good sized needle is used, the fluid readily drains away. The patient may, and usually does, go to his ordinary occupation, and at his visit in forty-eight hours, the part is considerably swollen; or, if this is not the case, inflammation may be excited by moving the threads. In the majority of cases, the threads may be removed in from eight to ten days. In only one instance has Mr. Smith met with insufficient want of inflammatory reaction to bring about a cure.—*Med. Times and Gazette*, Nov. 12, and *Practitioner*, December, 1870.

Treatment of Hydrocele by Injections of Perchloride of Iron and Manganese.—Prof. E. Marcacci has used a solution varying from six to twelve degrees in the treatment of hydrocele. The reaction is described as being generally acute even to the formation of pus. Prof. Marcacci thinks that the solution produces a fibrinous exudation upon the inner surface of the tunic, and that it is greater in proportion to the strength and quality of the solution. The quantity of fluid usually injected varies from about six drachms to three ounces, but, as a rule, small quantities are to be preferred. The fluid should remain in the sac for about two minutes. The pain is described as only slight, and the cure is effected in about ten days.—*Gazette Hebdomadaire*, Nov. 30, 1870.

Treatment of the Early Congestive Stages of Skin-Diseases.—Dr. Tilbury Fox expresses the hope that in the light of our progressing pathological knowledge of skin-diseases we shall arrive at more definite therapeutical principles and place less reliance upon the so-called specifics. He calls attention to the fact that as the skin is a composite structure composed of cells, nerves, glands, blood-vessels, etc., and as in each disease only one or more, or perhaps even all, of these elements are involved, that it is evident that arsenic, the physiological action of which is simply to give tonicity to the vascular system, will evidently fail in many cases. In fact, he is very skeptical as to the value of arsenic, and regards its efficacy as decidedly limited. He also thinks that in our topical treatment we are too much wedded to specifics, and instances sulphur, which, although it is sure death to the acarus, may produce unpleasant consequences upon the skin , such as eczematous eruptions. In fact, he thinks that much of our treatment is mischievous by reason of its activity, and recommends a soothing treatment in all cases of early cutaneous congestions. By soothing treatment he means one which prevents congestion and produces an exclusion of air—one which, in fact, puts the skin in a state of rest. On the contrary, he thinks that heroic measures designed to cut short an early congestive stage of a skin disease often render its course chronic and persistent. He thinks that in the early stages, before the deep vessels are involved, we can do much to check congestion by mild applications, and that active measures would do harm. He alludes to the fact that ointments slightly rancid are sometimes very irritating.

In acute general psoriasis he has seen an aggravation of the congestion by the use of tarry applications, while great relief has been produced by alkaline and bran baths, and subsequent oiling of the surface and the exhibition of cod-liver oil internally. He thinks that if in psoriasis the congestion is active, wet packing is much to be preferred to tarry applications.

In the early stages of erythema of the face, and in a case where there is congestive tendency, he thinks that calamine lotions, with appropriate internal treatment, are very beneficial.

In lupus he advises mild applications to any congestion surrounding the tubercles while the latter are actively treated, and the combination of any constitutional treatment which may be indicated.

Lichen ruber he treats with a paste of zinc, glycerine, and lead, and he found in one case that the disease was aggravated by the internal administration of arsenic, and was cured by assafœtida. Starting upon the hypothesis that eczema is the result of perverted innervation, he advocates the use of the mildest applications, such as poultices, fomentations, and zinc and glycerine plasma, because they diminish congestion and favor the discharge. He states that he is not by any means an advocate of an expectant plan of treatment ; but advises potent remedies after the congestive stages have passed. He thinks our efforts for the relief of congestion of skin-diseases will be futile, if it is caused by impurities of the blood, and that it is then necessary to remove these impurities.—*Journal of Cutaneous Medicine*, December, 1870.

Editorial.

THE JOURNAL OF CUTANEOUS MEDICINE.

We regret to hear that the publication of the "Journal of Cutaneous Medicine and Diseases of the Skin" has been discontinued. It was first issued in 1867, under the editorial management of Mr. Erasmus Wilson, who devoted to it his time and best talents for three years. When elected to fill the chair of Dermatology in the Royal College of Surgeons, last year, he abandoned the journal, because he felt that his engagements would not permit him to give it the attention called for. Dr. H. S. Purdon, of Belfast, then made arrangements, with the consent and assistance of Mr. Wilson, to continue the publication, which he did for one year, ending in March, 1871; completing the fourth volume, and covering a period of four years. In the preface of the last number, the editor tells us of "the limited support afforded us during the past year;" and says, "but we did hope that the important subjects advocated and advanced by this periodical would have excited a little more interest in professional circles than they have done. Germany, France, Italy, and America, each possess a Dermatological journal ably supported. Why not Great Britain ?" We regret sincerely that the journal has succumbed for the want of patronage and assistance. The advances made in British Dermatology during the past twenty years, and the general interest now shown in this branch of our art, ought to have secured a substantial success for the journal that so ably advocated progress in the special branches to which the pages were devoted. There is one feature, however, in the special German, Italian, and French journals, as well as our own, which should not be forgotten—we allude to the incorporation of "syphilis, and all diseases, whether general or local, having a venereal origin or lesion;" and the interest felt for, and success attending these last-named periodicals, must be attributed, in some measure, to the larger sphere of their usefulness. We have always earnestly advocated the incorporation of syphilis and allied diseases in the same journal with Dermatology, and the good that has been accomplished is manifested in the success that has attended the publications which followed this course.

New York Dermatological Society.—At the second annual meeting of this society, held June 14, 1871, the following officers were elected to serve for the ensuing year: President, Dr. F. D. Weisse; Vice-President, Dr. F. Zinsser; Recording Secretary, Dr. F. P. Foster; Corresponding Secretary, Dr. R. W. Taylor. Prof. Erasmus Wilson, of London, was elected an honorary member.

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RECENT ADVANCES IN THE PATHOLOGY AND TREATMENT OF DISEASES OF THE SKIN.*

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INTRODUCTION.

That there have been advances made in dermatology, and that these are recent, seems admitted by their consideration being offered as a subject for a thesis. This thesis is, however, limited to the "recent advances in the pathology and treatment" of cutaneous affections. We may therefore omit all reference to the classification of diseases of the skin, which at present is not only a vexed and most unsatisfactory question, but one that every writer of even a twenty-page monograph seems to consider must occupy a large, and often the most important part of his special publication. The more extensive works, also, are liable to be thickened by the not unfrequently prolix views of the individual author on this entirely unsettled topic of classification. We have sometimes thought it would be better for some thorough clinical observer and teacher to master sufficiently the details of dermatology, and draw up a classification that would meet the wants of the practitioner, and yet not so far out of the way as to embarrass the special teacher of dermatology in his work of education. Such a classification might fit in better with general medicine, and thus prevent dermatology being pushed aside as so much of a specialty as to render its neglect a matter of course, or of necessity. It seems to us the time has hardly arrived for a classification of cutaneous affections. They have as yet been *studied* too little, principally from the lack of educated observers, trained in noting and recording symptoms and the effects of remedies, and who are truthful and unbiassed in their deductions. Moreover, till quite recently the pathological anatomist and histologist paid but little attention to the diseases and disturbed functions of the common integument of the body, perhaps because the clinical teachers did not bring them so prominently before him. Thus we hold that, in the present state of knowledge, and in the present lack of any very defined and fixed classification of diseases in general, to attempt to build one up for dermatology, that shall be at all lasting, seems a simple waste of time. Pathology and histology will break off the boughs, or cut through the trunk of the most ingeniously contrived dermatological tree. We would not, by any means, be understood as depreciating the value of a truthful classification, if it could be got at, or worked out of our present knowledge. For ourselves, we do not quite recognize the necessity of *any* classification in our study and practice. A teacher may, most usefully for the student, devote hours to a thorough and practical description of the symptoms and treatment of the various phases of eczema, without once alluding to where it, as a whole, or its several appearances, belong in any one's classification. Some general order of bringing cutaneous diseases before his class is, of course, necessary for a teacher; but the less the student hears of the special order or classification, and the more of the particular disease, the more successful will be the treatment of his cases, and the better will he be enabled to classify for himself, whilst at the same time he has become trained in observation. Trained and truthful observation are particularly required in the student and practitioner of dermatology, who has to learn to believe his eyes against his ears, or, perhaps, make both yield to his experience.

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* Boylston Prize Essay, awarded in 1871.

The lack of the cultivation of these qualities, even in men of talent, has seemed to us to explain the comparative worthlessness of so much that has been recently published in dermatology, quite outside of the desire or necessity of the particular author inducing or forcing him to write a treatise or monograph. Without, then, the long experience of trained and truthful observers, and the comparing their several results, and grouping their work as a whole, by the highest talent, we shall not soon reach any satisfactory or well-based classification of the diseases and perverted functions of the skin. Let it be remembered, however, that the lack of such classification should not prevent special study, as it does not in way hinder it. Naturally enough, it is regarded as a reproach to dermatology, and, in a certain way, is merited, although its importance is thus exaggerated. These few remarks explain our willingness to comply with the strict limitation of the subject, and omit all further mention of classification.

We would gladly do the same with nomenclature, equally uncalled for by the terms of the subject, were it not that nomenclature is, as it were, the language agreed upon to speak in between writer and reader; and if one set of names for cutaneous diseases is used at one time, and another at another, then, as often as they occur, they must be mutually translated, to the annoyance of both writer and reader. Some years ago, we remember hearing a distinguished professor saying, *ex cathedra*, substantially, that ophthalmology was nomenclature. Yet, if we may trust to the positive results arrived at, we may conclude that this specialty has already got beyond such a state in spite of itself, so to speak. It is somewhat so at present with dermatology, which is in a sort of nomenclature condition. Want of experience and trained methods of study are, unfortunately, only too often and too successfully covered up by the manufacture of names, or the odd and curious misuse of those longest established. Perhaps no more striking proof of the necessity of adhering to well-founded and long-used nomenclature can be adduced, than that we are obliged, at this very point, to define what we mean throughout this paper by certain terms that have been sadly bandied about and abused in some of the more recent treatises. For instance, by *psoriasis* we mean the scaly affection generally known by this name, and not a stage or phase of eczema, as Wilson uses the term. Again, by *leprosy* we mean *elephantiasis Græcorum*, and not *psoriasis*, Wilson notwithstanding. Again, by the generic word *herpes* we mean circles or groups of papules, or vesicles, or both together. It does not designate a special disease, unless having attached to it a specific name. By the word *pruritus* we mean simply *itching*. By the word *prurigo* we mean a disease that we shall have something to say about in its place.

There are, of course, many other instances of misuse and abuse of nomenclature, but those we have mentioned are among some of the worst that recent authors have indulged in, either from individual idiosyncrasy, ignorance, or from a desire to appear peculiar, and thus attract attention. We desire here at the outset to say that we have the greatest respect for Prof. Erasmus Wilson, of London, both as a dermatologist of vast experience and as a man of independent thought and acute observation. For this reason we all the more regret his individual idiosyncrasy, in desiring to multiply and alter nomenclature without due regard to other teachers—not to speak of the profession at large—and his irresistible impulse to change established modes of spelling, arising, as can be seen, from his ripe scholarship in the languages of the Greeks and Latins. But for his imitators, who have not his experience or trained observation, and who but follow his classical knowledge, we have as students of dermatology no similar respect, and we cannot, in any truthfulness or independence, regard their words and writings with the same consideration. Let this, therefore, be our apology for any seeming harshness that, as we hold, a just indignation may induce us to indulge in. Every day makes us realize more and more how much Wilson, as a high authority and teacher, has hurt the progress of dermatology by his individual idiosyncrasy, adhered to with national persistency. His followers have, unfortunately, also supposed they were *like* him when they *imitated* him. That to the general profession, at least, dermatology is simply nomenclature, is perhaps truer of it now than was the same remark in reference to ophthalmology some fifteen years ago.

For the present admitted importance of the specialty there have recently appeared in dermatology more publications than general practitioners and readers can well comprehend. A mass of literature has been heaped up in a specialty little studied, and but slowly and reluctantly recognized. We freely admit that it is the fault of the specialty itself and its adherents, that has driven off those who would otherwise have gladly availed themselves of its acknowledged success, to benefit their patients and save themselves from discomfort. There is not, for instance, any book in English which a student or a practitioner can study whilst he follows the clinique and the lectures at any hospital where these are to be found. Certainly, for the subject of cutaneous diseases there have appeared a large number of treatises, monographs, and journal articles, a majority of which are worse than Hebrew to any but professed specialists, and very generally of little or no benefit to them. The more a practitioner endeavors to study almost any of these publications, the more he becomes lost, mystified, and the sooner disgusted, unfortunately not with the author, but with dermatology. The secret of all this matter in print, and the constant reports of cases, etc.—in other words, the recent great increase in dermatological literature, is well understood by those who have followed the specialty, but, we think, perhaps not by the profession at large. Now, a knowledge of this so directly concerns the appreciation of the advance, or otherwise of the pathology and treatment of cutaneous diseases, that we offer no apology for making known and dilating upon it here. For the past twenty or five-and-twenty years there have been at work a number of shrewd, practical, intelligent, if not highly scientific, and truthful observers, mostly clinical teachers having immense fields of study. Wilson represents this number in England; the St. Louis staff, in Paris; and above all, in Germany, Hebra at Vienna. The result has been, that they have learned, by diligent observation and careful experiment, how to cure successfully many diseases of the skin utterly out of the reach of the therapeutics of the general practitioner as he learned his profession at almost any of the schools ten years ago. These observers, where they have been clinical teachers, have taught their hearers also how to observe, how to diagnosticate, and how to treat cutaneous affections. Such knowledge, in any field large enough, is of great practical value, and would soon bring its possessor reputation and practice, since almost all general practitioners have plenty of cases of cutaneous diseases which have baffled their best efforts, and which they gladly turn over to the specialist, after they have learned to trust his ability and experience. Thus it is that the students of the Paris and Vienna schools of dermatology have spread a knowledge of the specialty, and by successful practice, both in England and America, attracted, particularly during the last five years, no inconsiderable attention to cutaneous medicine. The schools also are gradually recognizing the need of some teaching in this department, and have here and there made appointments in accordance. These students of the continental schools have also spread their teachers' views by a few treatises, many monographs, and innumerable journal articles, nearly all of which, no matter how ingeniously concealed, are but filtrations of the master's knowledge, more or less perfect according as the writer's sieve was more or less retentive. In proportion as these publications truly and clearly represented the master's thoughts and experience, they have done good. In proportion, however, as these were not well put, and the writer's own ideas and inexperience brought more prominently forward, they have done harm. There has been plenty of motive, but little necessity, for a great deal of dermatological literature. Cutaneous medicine and surgery cannot be learned from books alone. Dermatology is comparatively a simple specialty, but, like a foreign language, it can only be thoroughly mastered where it exists, *i. e.*, where a competent teacher has the necessary material to teach from. When once thoroughly mastered, however, it is, like a foreign language, readily employed, not easily forgotten, and always of the greatest practical value.

There remains to be told, however, another part of the secret —why dermatology is, and will for a long time continue to the majority of medical men, to consist of only an unintelligible and unmeaning classification, and a more or less heathenish nomenclature, affording apparently quite sufficient excuse for tipping the whole overboard. Success naturally calls forth imitation, and nothing is more natural than that an apparently successful specialty, we mean as regards reputation and practice, should induce many to take it up and attempt to follow it without any previous training in it, or perhaps even study of it. Such imitators soon find that the medical man's only advertisements—namely, cured cases—do not increase, and something has to be done to acquaint the profession and laity of the author's intention to follow out a special practice. A book or monograph is soon patched up—the more unintelligible and the less clear and concise the better—and through it a reputation is soon gained; for cutaneous medicine is so little understood in the profession at large that a book means an author, and the idea of an author means a knowledge of the subject. The more outré the thoughts the more learned does the writer naturally seem, particularly if a little of other people's original ideas are ingeniously interwoven so as to appear striking and new. Of course, we recognize this as one of the curses of medicine at large, but we must confess that it does seem as if unfortunate dermatology had to bear more than its fair share of pretenders' efforts in all three of the principal languages. The profession at large, however honest and anxious to decide, are not in a position to discriminate between one man's work and another's, in this specialty. For the dermatologist there is no more thankless task than that of going over and showing the mistakes and inexperience of the many authors who have rushed into print because they have found something new to themselves.

Did all this stop here, we should not feel quite so indignant, or have thought it necessary to have so freely ventilated the secrets of the specialty; but there has been recently such a quiet monopolizing and adopting, to use no stronger expression, of the ideas of the masters in dermatology, that it is quite time for the profession to understand it, and thereby be able to discriminate. Another point must be alluded to—namely, that when the students of the European schools have settled down in England and America, and commenced to practise what they have learned, a little experience has soon shown that they, to their own surprise, were not so very much more successful than their older confrères in the neighborhood, to whom they had not accorded, perhaps, any scientific knowledge, at least of cutaneous medicine. Diseases of the skin are often so loathsome or so troublesome as to force the country practitioner, and still more so the city one, to hunt up or hit upon some successful remedy, in order to save himself and his patient. Thus, shrewd medical men will be found carrying out quite independently very much the same line of treatment. In this country, the graduate of the European school, in attempting to prescribe the same remedies in the same manner as he has seen done the other side of the water with such good results, finds that he has another people to treat, whose common integument as well as general system will by no means bear a similar amount or strength of either external or internal remedies. Lack of like success discourages and disappoints him, giving rise to a doubt in the minds of his professional brethren at the same time as to the advance in treatment of the specialty. If he is shrewd he will let time and experience again teach him.

Here, once for all, we desire to disclaim any apparent ignoring of the French school and the Paris teachers. No matter how much they may talk in their lectures and theorize in books, yet the success of the St. Louis staff will, after all, be found to depend on methods of treatment but little different from what is seen in Vienna or London. The great clinique of the General Hospital of Vienna, including the syphilitic and cutaneous wards, has, however, been a well of knowledge into which many pumps have been successfully inserted. One difference in the two schools is that, as in all other departments of medicine, Germany teaches the student how and what to see, putting him in the best position to practise what is preached to him; whilst there is in France at present a national tendency to theorize brilliantly to the pupil without that steady plodding over him, so essential to solid progress. If one is thoroughly conversant with cutaneous medicine, and has seen as well as heard much, the French works from the hands of the Paris dermatologists will afford him interesting reading, because it is always pleasant to recognize old friends among strange people in a foreign land, and as soon as one can get accustomed to and remember their names, fellow-travellers at least serve *pour passer le temps.* In all seriousness, however, the lack of practical dealing with the subject, and attempting to teach the reader what can be done for this or that affection, or what cannot be done if such is the case, is perhaps the true cause of French works on dermatology being almost without exception most unsatisfactory, and perhaps not unreliable, but of no practical value for reference. There seem, also, to be a number of invisible and intangible cords, one end attached to the word *dartre* and the other to the pens of all French dermatologists, so that these cannot move except under some reference to that potent spell. This is getting to be very much the case with the word or idea *neurosis* and the English writers and their imitators. It is but fair to warn where pathology and treatment are not advancing.

It has been anything but a pleasant task to thus expose the present weaknesses of a branch of medicine already become a decided specialty. We think, however, it was called for, and we believe that nothing but so complete a showing of the dermatological hand could explain our willingness to comply with the strict letter of the subject as proposed, and omit what we are free to confess has its attractions for discussion, namely, the present classification and nomenclature of skin diseases. We can also now recognize the judiciousness of the wording of the question, namely, recent advances in the *pathology* and *treatment* of diseases of the skin. To these now we gladly pass, taking them up in definite order, so as to avoid confusion, but following no special classification, and of course omitting those affections concerning which nothing is to be said.

The exanthems, scarlet fever, measles, and small-pox, belong rather to general medicine, that is, these cases do not come under the dermatologist's care, except perhaps the latter in the great hospitals where a special department exists. This segregation, however, is often one of convenience, and not always adhered to strictly. The sequelæ or consequences of scarlet fever and measles have been more carefully studied, but are discussed at length in the works on clinical medicine where they belong, and we need not dwell upon them here. One of the sequelæ of small-pox and varioloid, namely, pitting of the integument, comes before the specialist, and dermatology has been called upon, not so much to explain its pathology as to devise a ready and perfect preventive of it. To enumerate the remedies proposed and tried, and their proposers' names, would be to pretty nearly fill this article with a list of the materia medica and the names of clinical and dermatological writers. The secret lies in the keeping constant moisture of some form in contact with the cutaneous surface, on the principle of the steady poulticing a forming abscess. The want of success depends upon the almost utter impossibility of having the whole integument, including the most important part, the face, perfectly and always moist, during so long a time as is necessary with a patient suffering to the extent a victim of small-pox or varioloid does. The reputed success of this or that remedy, in the hands of one or another practitioner, is also readily explainable by the following fact, quite lost sight of or perhaps unknown except by those dermatologists who have had large small-pox wards in great epidemics, or been attached to hospitals for many years. Not more than a half of the patients who have had variola vera exhibit cicatrices afterwards, and in varioloid either none at all or but a few are formed. This will be found to be true by any one having opportunity to see *through* some hundreds of cases. Now, any physician having had a few dozen cases, and used some one remedy to prevent pitting in them all, may have met apparently with marked success enough to induce him to publish the results of this special treatment. Another gentleman is naturally induced to try the method, and with him it may seemingly utterly fail; the truth being that the remedy had no effect whatever, except that if it was something to moisten and soften the skin the patient was rendered more comfortable. When the pustules are deep-seated in the cutis there is a positive loss of substance that no method of treatment can obviate, and the scar causes a "pit."

It seems doubtful whether the pathology and treatment of the venereal diseases should form a part of this article. As they recently have been so well and so thoroughly discussed, and as all that is new is early brought before the profession in medical literature, we presume they were not intended to be included. At present their study is a separate specialty, and although they are brought together in special journals—much as the eye and ear frequently are—yet we propose to avail ourselves of the benefit of the doubt, and omit allusion to them here. Specific inflammation of the mucous membrane of the generative organs produces no cutaneous disease; the chancre sore, also, is not followed by eruptions; but *constitutional syphilis imitates*, on the common integument of the body, almost *every other affection* this organ is subject to, even the results of the presence of animal and vegetable parasites. Hence true syphilis has been brought in under dermatology, and hence the teacher of dermatology is obliged to go over and explain and exhibit the results of constitutional syphilis, in order, if for nothing else, to teach his hearers how to diagnosticate one from the other—perhaps the first thing the young practitioner will have to do when dependent on himself alone for guidance, and on what he has learned for instruction.

PSORIASIS.

Good strong common sense, a desire for truth, and a wish to succeed, have enabled Prof. Hebra, of Vienna, to give us in his book the very valuable results which his many years' experience with this incurable affection afforded him. His pathology does not, however, carry him further than that of Rokitansky, Wedl, and Simon, namely, that the essential nature of psoriasis consists in an excessive growth of epidermis, or in a proliferation of the epidermic cells, and their accumulation upon circumscribed spots at which the papillæ of the corium are hyperæmic.

Wertheim found, on examination of spots of psoriasis under the microscope, always enlargement of the papillæ, and judges therefrom that the vessels are distended. Neumann obtained sections of psoriatic plaques from living patients, and found the epidermis cells increased, and also the rete Malpighii hypertrophied. The papillæ, especially of the older plaques, enlarged. The corium and papillæ were filled with numerous proliferations. These cells appear principally in the upper layers of the corium and on the tops of the papillæ, producing there a little swelling. A cross section through a papilla exhibits plainly the cell-growth filling the stroma and forming a ring, in the centre of which is seen the section of the vessel. From this we must deduce that psoriasis is an inflammatory process of the upper layer of the corium and the papillæ, accompanied with greatly increased cell-growth, and with which the papillæ are considerably enlarged. These enlargements cannot, however, be considered as characteristic appearances of psoriasis, since they occur in other chronic diseases, as prurigo and eczema. In this last a difference exists, in that the enlargement of the papillæ appears only after longer continuance of the affection, whilst in psoriasis it is present from the first. The excessive formation of epidermis is, therefore, but a hyperplasia of the cells of the Malpighian layer, accompanied by an increased throwing off of the epidermic layer.

It was a study of, and clinical experimentation with this disease, which especially taught Hebra the value of external applications, and in general their use in cutaneous affections. We cannot, of course, enter here into the details of the therapeutical use of soft soap, water-packing, the several forms of preparations of tar, and various stimulating ointments. And this is all the less necessary since the journals of the last half-dozen years have been pretty full of the English, French, and German methods of use. But how few practitioners have learned thereby to use external remedies with entire satisfaction to themselves, or the success that attends their application in the great cliniques where they have been most employed.

The Vienna school of dermatology has been so practical and so successful, as to have attracted foreigners, both American and English. We are now just beginning to hear how treatment and remedies must be modified to be successful with two other quite different peoples. There is no better instance in point than the most practical and valuable contribution of a good observer and truthful recorder, Dr. Anderson, in his "Psoriasis and Lepra" monograph. Hebra, in his immense field, had seen psoriasis in the high and low, rich and poor, clean and dirty, fat and lean, and all its phases in all these; so that with his strong vein of common sense he, as usual, was loath to accept this or that or anything as *causes* of psoriasis, to fill up his etiology with. Neumann follows him in this respect, neither of them agreeing with Wilson's curious notion that psoriasis is somehow a worn-out syphilis. Squire and also Anderson think that patients are more apt to have psoriasis (which must be latent) appear when they are out of health or run down, like nursing women and over-worked business men, etc. Experience rather points this way, but these same people will also have their curse burst out when they are in the best of health.

As psoriasis is not contagious, in the rarest cases ever fatal, pretty amenable to proper treatment, but is hereditary, what are we to say to patients who ask if they may marry? Here pathology and treatment have really advanced, and we can reply: The wife will *not* have the disease from marriage, and the children may escape. Comfort and appearance can both be ably assisted by thorough and well-conducted treatment. If an equal cause was to stop marriage in general, there would be few divorces.

Statistics show, taking England, France, and Germany together, that psoriasis occurs about one in fourteen among all affections of the skin; the proportion of the sexes, men 143 to women 156, from the combined results of different observers. It may occur as early as at six years, very exceptionally before this time. As we have said, it seems unnecessary to discuss or explain the methods of treatment found so efficacious in the last ten years, and now so generally described and followed. Moreover, all the remedies above mentioned have been pretty fully placed before the profession. Experience has shown that our people bear external and internal treatment to a much less extent than Europeans, as well exhibited, for instance, in the use of arsenic in psoriasis. It is rather an ungracious task to mention with anything like a slur the probably quite truthful belief of this or that gentleman in reference to one or another remedy for psoriasis. Pathology teaches us that we have an affection that is incurable, *i. e.*, its return cannot be prevented, but it also says that increased or heaped-up epidermis cells form the principal element. Treatment, therefore, points towards the most rapid method of removal of these, and this seems best accomplished by the use of water, irritants, etc., externally, and arsenic internally.

Hardy, during the inflammatory stage of psoriasis, prescribed emollient and alkaline baths, and laxative medicines. In the second stage he administers arsenic, and at the end of this period, when the disease has become chronic and stationary, he has recourse further to ointments containing mercury, sulphur, or pitch. Oil of cade he uses, combined with glycerine and starch. Lately he has found benefit from phosphorus.

Spender thinks psoriasis, like its congeners, arises from "tissue irritation," which may be aggravated or perpetuated by an unhealthy state of the blood. In anæmia he says arsenic will not act unless combined with some preparation of iron.

Lipp has used hypodermic injections of arsenic for psoriasis, $\frac{1}{20}$ to $\frac{1}{5}$ of a grain being employed every second or third day with some advantages, namely, less of the drug, no derangement of the digestive organs, and shorter duration of treatment. No more permanent benefit, however, was obtained than by arsenic used in other ways.

McNab has used one part carbolic acid to four of lard melted together, applied at night; and when the scales are removed oxide of zinc ointment. This with a constitutional course. With him Liveling also concurs.

Passavant writes Prof. Hebra he has been the victim of psoriasis for twenty-five years, and temporarily gets rid of it under meat diet. To this Dr. Caspian replies he was without his torment under milk, bread, soup, rice, and porridge; losing weight and strength, however. Simms advocates copaiba for obstinate cases of psoriasis.

Lombroso reports success with ergot of maize, ʒ vj. of the tincture given daily three times. This remedy was taken for a few days without trouble, and then it began to affect the kidneys and intestines, finally producing peculiar painful modifications of cutaneous innervation, shown by a sensation of intolerable itching and burning. The disease improved as the poisonous symptoms were developed.

We might go on almost *ad infinitum*, quoting the success of remedies. We close with but one remark, namely, that so far as can be judged, if the direct effect of arsenic on the skin can be obtained before we can have the other deleterious effects on the system, then this powerful drug is valuable. But its bad effects on the system seem to counteract or prevent its *cutaneous* effect, they may also be too severe to allow us to proceed. In this country at times it acts well, and is borne well. In the large majority of cases, unfortunately, it does not seem to do so.

LICHEN SCROFULOSORUM.

Willan described five species of lichen which recent pathology has thus disposed of: *agrius* and *simplex* have been placed where they belong, under *eczema*. *Pilans*, examination has shown not to be a disease, but simply the collecting of epidermis which holds or bends over the hair coming out of the follicle. This is seen especially on the thighs of those to whom soap and water are strangers, *Lividus* is due to an absolute local hemorrhage lifting the epidermis into a papule, and caused by a scorbutic condition of the system.

Wilson has made a *lichen planus*, and divided this into *diffuse*, *annular*, and *marginal*, simply different phases of a disease we will presently speak of. Hebra adopts the plan of not giving a name to a disease unless it is perfectly distinct and has its own course, etc., distinguishing it from all others. He has made an advance in pathology and treatment of an affection he calls *lichen scrofulosus*, cases of which in England might get the name of *l. circumscriptus*. Fine, dirty brownish papules, consisting of a mass of epidermis, seated at the hair-sac opening, more or less in circles or segments of circles, on the trunk generally; among them or near by are seen some scattered pigment spots, and here and there an acne-like tubercle or pustule. But little or no itching, and therefore no consequences of it. The eruption is seen in patients exhibiting decidedly scrofulous symptoms, is slow of inoculation, not dangerous, and readily yields to cod-liver oil externally and internally. Generally in males between 15 and 25 years. When occurring in children the extremities are affected often exclusively. This positive limitation and definition, together with the successful treatment, supported as it has been by others, constitutes a true advance in pathology and treatment.

Kohn has examined anatomically lichen scrofulosorum, and reports that it consists in the appearance of exudation cells in and around the hair-follicle and sebaceous glands. The cells first form around the vessels and at the bottom of the hair follicle and sebaceous gland, afterwards inside of these, and finally they collect to such an extent as to press up the enchyma cells of the follicle towards the opening, loosening also the sheath of the root from the follicle wall. A continuation of the process distends the hair-follicle. The lichen papule is due to cell infiltration of the papillæ around the follicle; the central scale is composed of the mass of epidermis collected in the distended follicle opening.

LICHEN EXUDATIVUS RUBER.

Here again we are indebted to Hebra for, so to speak, the discovery of a definite affection of the skin fortunately rare, but unfortunately very serious and frequently fatal. Very likely Wilson's *lichen planus* can be included in or under this disease. Hebra has given the above name to a disease consisting of an eruption of miliary papules at first distinct and covered with a thin scale, causing but little itching. They are of a reddish color, and once formed do not increase in size, but the increase of their number causes them to unite into large patches, red, infiltrated, and covered with scales. These changes take place at separate and distinct spots, finally occupying large tracts on the whole body. The cutis becomes of twice its ordinary thickness, the motion of the joints impeded, fissures cover the joints from which blood flows to form crusts, etc. The nails become affected, thickened, rough, and brittle. Walking and grasping objects become painful. The hairs of the head, axillæ, and pubes are not affected; on the rest of the body they are reduced to a mere lanugo. There is itching when the disease is extensive, but not before. The patient, as the affection occupies large tracts of the integument, becomes broken down, nutrition weakened, and with great marasmus there is generally fatal termination. This cutaneous disease resembles lichen scrofulosum, psoriasis, eczema, and pityriasis rubra, hence the necessity for careful differential diagnosis. This Hebra gives in great detail, of course here to be only referred to. All causes are but surmises. The age so far reported, 15 to 40 years. The patients were men with the exception of one. The pathology has been studied by Hillier, who says post-mortem examination of the diseased structure showed the skin (red and thickened during life) pale, without fat, loose, and of ordinary thickness; there was some desquamation still to be seen. The microscope showed, in sections of the skin, a peculiar anomaly of the root of the hairs, which instead of being cylindrical, were funnel-shaped with the small end down. The papillæ hypertrophied and blood-vessels dilated. Neumann obtained portions of the skin from one of Hebra's patients, and he gives careful descriptions of the miscroscopic results, which are in brief as follows: The epidermis cells heaped up in large masses, with fine granular contents. The cells of the rete Malpighii sometimes grouped, and sometimes alone, and sending out thick, broad, and long prolongations between the papillæ; around these latter here and there brown pigment cells. The papillæ enlarged, filled with a net of elastic fibres more numerous than normal, as is also the case through the whole cutis. The vessels dilated, as also their twigs in the papillæ. Arteries and veins in the deeper layers of the corium, tortuous. Along the vessels numerous cell-growths increasing their diameter and filling up thus the papillæ. The openings of the sweat glands with funnel-shaped dilatation and filled with numerous epidermic cells. The sebaceous glands are few and probably destroyed. The external sheath of the root of the hair shows a peculiar appearance; composed naturally of nucleated cells, more numerous around the shaft than at the bottom of the follicle, in this disease the *reverse is found*. The follicle is dilated by these cells into regular teat-like diverticula resembling an acinous gland, showing, however, nothing else abnormal. The root of the hair is stubbed like a brush. A similar increase, also, of the smooth muscle fibre as seen in other chronic diseases of the skin, like ichthyosis, old eczema, elephantiasis arabum, etc.

Wilson described a *lichen planus* which he thinks will include Hebra's lichen ruber, although we cannot see how his cases can be so classed. This is also Fagge's opinion deduced from two cases of this lichen planus which he allies to psoriasis. Anspitz and Pick show that these lichen-like forms which Wilson groups together, belong to lichen scrofulosorum, etc.

As to *Treatment.*—Fortunately the disease is but rare, yet Hebra has seen enough to have opportunity to try many external and internal remedies. These all seemed to fail, till at last he has found success with arsenic in doses of one-tenth to one grain a day. At least the patients so treated got rid of their malady, and had for some period of time no return of it, so that our prognosis now can be more favorable than formerly. This affection would be so readily mistaken for psoriasis or eczema in some stages, that it may be observed but not diagnosticated. Hebra counts some twenty-one cases, and Wilson says he counts over fifty.

PITYRIASIS RUBRA.

Bateman, Wilson, but more especially Devergie, seem to have spoken of under this name the disease Hebra restricts it to. But they classed with it some of the phases of psoriasis, eczema, and the anomalies of sebaceous secretion. Hillier has also described and seen the affection, which is one extremely rare and *sui generis.* For its pathology and treatment we have again to thank Hebra. His differential diagnosis brings out the affection clear and distinct from all others it in any way resembles. The *pityriasis rubra* he has several times seen, consists in nothing more than an intense redness diffused over a large part of the skin, or even universal, disappearing beneath the pressure of the finger (when it gives place to a yellowish coloration) and accompanied by the presence of fine white loosely adherent scales, which result from the constant shedding of the most superficial layer of the cuticle. There is no considerable infiltration of the cutis; no papules or vesicles are formed; no secretion is poured from the surface; the itching is slight, and does not lead to the formation of excoriations; no fissures make their appearance; and lastly, particular regions of the body are rarely affected, the *whole* surface of the skin being generally attacked. It is very slow, presenting very few changes. Heat and cold, of course, alter the degree of redness for the time. Perhaps for years the patients are not much affected, but they generally lose flesh and strength, and finally sink in marasmus. After death the redness has disappeared, and the microscope fails to give any definite results. Hebra tried all the external and internal remedies so successful with psoriasis and ichthyosis, but did not succeed in arresting the disease. Continued tepid baths (for hours), oils, and emollient ointments, rendered the masses of epidermis more transparent, and the skin more supple. Although our prognosis must be bad, we at least now know what it is of no use to waste time with.

Benson and Smith report a case of *dermatitis*, or *pityriasis rubra*, which they hold was the same as Devergie and Hebra's *pityriasis rubra*, or Wilson's *pityriasis rubra exfoliativa.* Arsenic was administered, and the affection disappeared after thirteen weeks of existence. This same treatment Hebra did not find successful.

ICHTHYOSIS.

Some advance has been made in reference to this peculiar cutaneous affection, by the strong common sense of dermatologists here and there insisting on excluding from under this term those forms of disturbance of sebaceous secretion where a collection of the material gives to the skin an appearance resembling true ichthyosis. Fagge's microscopic researches have shown that Devergie's subdivisions of the affection would not hold anatomically. He found that the collection of epidermis masses in ichthyosis was not produced by excessive formation of this material, but by its abnormal tenacity, and the hinderance this affords to its desquamation. He found, also, redness and inflammation, contrary to general belief. In several cases he noticed incomplete development of the body, and judges, therefore, ichthyosis to be more than a local affection.

Lailler objects to Wilson and the English dermatologists classing sebaceous troubles with ichthyosis, and adopts the German's strict separation of true ichthyosis, without noticing that

Hebra had taught this for five-and-twenty years. We mean by this a definite idea of pathology, namely, that true ichthyosis is not due to trouble with the sebaceous secretion. Milton, after pretty careful study of two cases, says nothing was observed in either instance which seemed in any way calculated to throw light upon the pathology of the disease. In all his patients he noticed a slender frame, small bones, and the muscular system sparingly developed. He could find nothing amiss with any other function or secretion. He saw the disease in father and child. Its hereditary tendency is now well understood and recognized. Sedgwick speaks of a man with ichthyosis whose five children, three males and two females, escaped, but it attacked four of his five grandsons, sparing his only two granddaughters.

Hutchinson admits the advance made by recognizing that the sebaceous troubles were the cause of *some* forms of ichthyosis, as hitherto reckoned. He thinks, also, the word *congenital* cannot be applied to it, since clinical facts prove that it shows itself later. He concludes that too strong a line has been drawn between *sebaceous* ichthyosis and *true* ichthyosis, and thinks that many of the forms of pityriasis in young people, that which is known as *xeroderma*, are modifications or degrees of the same trouble. But, as Hillier says, the true nature of the cases which really depend on altered sebaceous secretion, can readily be ascertained by removing the scales or horny concretions, when the enlarged orifices of the sebaceous glands will be readily seen. Moreover, Simon examined the scales of a person with ichthyosis, which were of a gray or black color, softening when placed in water, and a section under the microscope showed the structure to be composed of compressed epithelium cells. On incineration the scales left an ash containing carbonate and phosphate of lime, and peroxide of iron; the latter was in such abundance as to communicate a yellow color to the ash. The ash yielded by the incineration of the ordinary thickened skin on the hands and feet, is perfectly white, containing a mere trace of the peroxide of iron. The more extended chemical analysis of the scales by Schlossberger, and the microscopic examination of the masses by Büchner, also tend to disprove Hutchinson's very natural regrouping of the now separated affections called ichthyosis. Neumann's studies of sections of the disease cause him to conclude that a fully-developed ichthyosis is accompanied by hypertrophy of the whole cutis and qualitative alterations and increase of the sebaceous secretion. The increase of this secretion and the agglomeration of the superabundantly formed epidermis with the cutaneous glands, explain the adherence of the epidermis to the skin. The epidermic masses contain fat in large amount. The papillæ are enlarged, as also the vessels. The cutis thickened. A vertical section shows the epidermis thicker, the upper layers darker colored, the lower lighter. At the interspaces between the enlarged papillæ, where the epidermis reaches down deep, the pointed cells are especially developed. The hair-follicles are at first present, rather elongated, and contain a hair. Sebaceous glands no longer recognizable. The openings of the hair-follicles are often closed also. A section through a horny plate of ichthyosis shows it to consist of readily separable concentric bands of epidermis cells; within these either transparent bubbles or dark brownish yellow material, probably sebaceous secretion. Kohn also reports his microscopic examination of ichthyosis hystrix to be noticed with the above.

Paget reports the case of a lady who had ichthyosis of the tongue for a year, and then well-marked ulcerating epithelial cancer appeared. Hulke reports a case of hypertrophy of the epithelium and papillæ of the mucous membrane of the tongue, in which, after twenty years, epithelioma appeared. He recalls two other cases, and, as Ullersperger remarks, although the connection between the ichthyosis and malignant disease was not, perhaps, strictly proved, yet the increased activity of cells of epithelial type in both cases is of import.

Flittner reports an interesting case of ichthyosis cornea, in the form of a circumscribed spot of ichthyosis on the thigh, and none on other parts of the body.

So much for the pathology of ichthyosis. As to *treatment*, much advance has not been made over the already old methods of arsenic internally, continued baths, cod-liver oil, and the various fats externally, besides soft soap and the other remedies found so efficacious in psoriasis and similar affections, where we desire to quickly macerate and get off superabundant epidermis. No radical cure has been discovered, but temporary relief is obtainable. The acute exanthems, small-pox, scarlet fever, and measles, seem to act favorably on ichthyosis. Hillier calls attention to the use of glycerine, which possesses some properties rendering it more serviceable than fat or oil. It absorbs water, so that when on the skin it keeps this more moist. It mixes readily with water, and can be easily washed off. For ichthyosis he used a soap bath three times a week to get off the scales, and night and morning rubbing in of one part to fifteen of starch and glycerine. This treatment is palliative, and he hopes it will prove curative.

ECZEMA.

Eczema constitutes a majority of the cutaneous affections even a specialist has brought to his notice, and therefore its great interest. The last five and twenty years have seen much progress in pathology and treatment. The English, as a whole, have followed Willan, the French give, quite unanimously, in their description of the course, causes, and treatment of eczema, the views of their countryman, Rayer. Somewhat by mutual consent, an advance has been made in recognizing general and local, chronic and acute eczema. And notwithstanding the individual idiosyncrasy here and there cropping out, of refusing to regard all the appearances formerly called impetigo, psoriasis, and other names applied to the several stages of acute and chronic eczema as belonging to it, yet now they are almost universally classed together under the general name of eczema, with perhaps an adjective to indicate which stage is meant. But to Hebra's patient perseverance and truthful clinical observation we owe the advance made in the *treatment* of eczema which is now generally spreading abroad, although the same has been practised and taught in his wards for more than twenty years. The success of those who have studied long enough under him to be able to follow his methods of treatment has been very great, especially if they were sufficiently grounded in their professional education, *i. e.*, not too exclusively specialists, and able and willing to recognize the differences of climate, occupation, and a host of other details which go to make up different peoples. Hebra's chapter on eczema in his book translated by the New Sydenham Society, Anderson's monograph, and later Fox's, have done much to promulgate Hebra's methods of treatment, and the modifications found requisite and successful in English practice. The French dermatologists will also be found to employ much the same kind of treatment, although but little of it is dilated upon in their treatises.

The pathology of eczema has lately had more attention paid to it, and with good results, since the microscope has shown us the alterations which take place in the skin, explaining the varied appearances seen in the several phases and stages of this protean disease. Neumann produced artificial eczema on a rabbit's ear, and watched the changes under a low power. There were rhythmic contractions of the vessels, and finally dilatation, ending in permanent stasis. The ear that was at first transparent became opaque, swollen, and in a few hours numerous serous vesicles appeared. After forty-eight hours the animal was killed, and the tissue found infiltrated with serous fluid and numerous cell-proliferation.

Biesiadecki gives a more extended account of the formation of papules and vesicles. The papillæ over circumscribed spots become thickened and elongated by infiltration of cells and serous fluid. The connective tissue corpuscles of the papillæ are increased in number, large and succulent. Numerous spindleshaped cells are seen in the mucous layer, or one-half still imbedded in the papillæ. They force asunder the cells of this layer and reach up to the epidermis. In this mucous layer they often form a thick mesh, permeating it in various directions. Within this mesh are seen the somewhat swollen epithelial cells with their protoplasm less granular. These circumscribed infiltrations of the papillæ and mucous layer form the eczematous papules. This cell-proliferation in the papillæ increases, and the superficial cells of the mucous layer swell up and burst, whilst the epidermis rising above thus forms the vesicle. The spindle cells are then still more abundant, they act as juice-carrying canals, bringing the nourishing material to the mucous layer. In acutely developed eczema they suddenly appear in great numbers, forming a thick network. With the abundance of these cells in the mucous layer there is a larger amount of the fluid saturating the papillæ, so that it often forces up the epidermis in the form of a bulla. If the epidermis is removed the fluid trickles out (weeping eczema). This explains the way the fluid exuded in the papillæ reaches the surface through the mucous layer.

Neumann says that Cohnhein and Recklinghausen's experiments answer the question where this proliferation comes from, namely, the wandering cells out of the blood-vessels. But Recklinghausen also showed that in a piece of cornea cut out and kept alive in oxygen and moisture, the cells continued increasing for twenty-four hours without blood-vessels; hence this proliferation must come from other tissue elements. Pagenstecher, however, in preparations from the living, put while warm into weak chromic acid, found in great abundance spindle-shaped cells, which he identified with the "wandering cells," as Biesiadecki has described in the normal skin when an increased epithelial development had preceded (granulating, cicatrizing surfaces, psoriasis, chronic eczema, in the parts around an epithelial carcinoma). He supposes that the epithelium does not originate in a direct multiplication of the epithelial cells, but from these wandering cells, by their entry into the region of the epithelial formations, becoming in some measure infected by the latter, and so changed into epithelial cells. When epithelium was increasing he always found these wandering cells in great abundance. The gradual change of these cells into other tissue elements, as connective tissue cells he has observed with Hartnack's immersion lens. At this point Fox's remarks are directly in place, and we quote them briefly here. He says: "But this question occurs here,—What relation exists between the capillary congestion and the cell-proliferation? Is the vascular alteration the consequence of cell-activity—that is, is it the response to a hyper-activity of the cell-elements, which acts, if I may say so, as a *vis à fronte?* Or is it the reverse? —is the cell-proliferation the result of an increased supply of nutrient fluid sent to or retained in the part? I am much inclined to think that in eczema both cells and vessels play an important and somewhat independent part in obedience to a nerve paresis. Mere capillary excitement does not give rise to eczema. If that were the case we should have the erythema overstepping their present limits. Mere capillary changes are unaccompanied by special cell-changes; but these latter involve the former. *A priori*, one is led to believe that there is some cause at work which directly stimulates the cell-proliferation in eczema, and that the direction which this takes towards pus-formation on the one hand, or fibrillation on the other, depends upon the general nutritive tendencies of the person attacked. The acute cell-proliferation may imply and induce capillary excitement; but it seems that the two things are coincident. Now, what can account for this duplicate condition? I think an alteration in the innervation of the part attacked. Looking to the general mode in which eczema is induced, to its history, and to the results which have recently been published by Heidenhaim, Pflüger, Eckhard, and others, as to the influence of nerve-irritation in the production of tissue changes, I am quite disposed to agree with Hebra that in eczema "it is *faulty innervation* which is the most important element in its production." I said that cell-changes of a peculiar character were seen in the rete mucosum; and not many months since Podcopaew apparently demonstrated that nerves run up and form exceedingly minute plexuses between the rete mucosum and the upper laminate epithelium. Perhaps I ought to say that though Hebra believes that perverted innervation is the prime cause of eczema, he thinks it leads "to congestion and other disturbances of the circulation," and does not refer to the influence of nerve-irritation in inducing cell-proliferation. The latter is, I think, a necessary point to be admitted in explaining eczema.

According to the duration of eczema the anatomical changes are of course different. The microscope detects no difference between this exuded gummy fluid and ordinary serum. The follicles, the papillæ, and the upper layers of the corium are swollen in acute eczema, but this swelling disappears in the majority of the cases. If the eczema is chronic, then the skin becomes thickened, the lines and furrows deeper, the papillæ enlarged so as to be visible to the naked eye. The older the eczema the larger the papules and the greater the cell-proliferation in the corium, so that this sometimes reaches down into the deepest layers, even to the *panniculus adiposus.*

Fox says: "It has been the rule to regard eczema as an inflammatory disease, and the expression of a diathesis, styled by the French the "dartrous diathesis"—a convenient term, as Anderson says, to cloak our ignorance of its nature. The word "debility" has been used to characterize the constitutional condition upon which eczema is thought to depend. What is really meant is, that the local changes in eczema are due to an altered state of the nutritive fluids of the body, and primarily of the blood. Now, I recognize the fact that eczema may be modified by diathesis, but that it is not essentially the result of any special alteration of the blood-current. Speaking in broad terms we should say, moreover, that the cause of eczema is multiple; it is perverted innervation as a *sine quâ non;* but *plus*—not as causes, but part causes or excitants in a variety of combinations and varying frequency of coexistence—general debility, morbid blood-states, strumous diathesis, local irritation of the most diverse kinds, disease of important viscera, mental depression, and so on."

To Hebra we certainly are indebted for the great improvement in the treatment of eczema obtained by external applications. The detail of these we need not of course here enter into, since the journals have lately given it quite fully. We would simply recall the use of water in baths, douches, and cataplasms; the employment of fats and oils to remove the dried products of eczema; the application of soft soap and its combination with alcohol; the various preparations of tar; the ascertained value of vegetable or mineral powders strewn on to prevent irritation of opposed surfaces; bandaging over eczematous spots; and finally the use of gutta-percha cloth over the whole surface affected, as a limb or both extremities, etc.

It seems hardly necessary to here gather together the various recommendations and prescriptions scattered through the special and general journals, as they meet every one's eye, and on examination will generally be found to be a sort of sedimentary deposit from the clinical discoveries of the masters and teachers in dermatology. Over the many pages in Wilson's Journal of Cutaneous Diseases, written by himself, Milton, and others, and over such articles as Stewart's, we can but join with Auspitz and Pick in a suggestive shake of the head, and to this will be added a slight blush for dermatology over many articles and pages England and America have produced on the pathology and treatment of eczema.

Cantani gives an interesting article on the pathology and treatment of eczema. In reference to the latter, he repudiates from general treatment when indicated, arsenic and cathartics, highly praising iodide of potash and mineral waters, natural and artificial baths, and other treatment much like that above spoken of.

IMPETIGO.

The morbid appearances that were formerly designated by this name are now by the best authorities included under eczema; and even those who resist this, describe an eczema impetiginodes and an impetigo eczematodes. The only eruption apparently which could be called impetigo, is that of variously sized pustules which form during processes of inflammation resulting from injuries, burns, chemical or otherwise, cutaneous poisons, etc. Concerning these nothing specially new as to pathology or treatment has been very recently brought forward.

A contagious impetigo has been described by Fox, who claims Allbutt and Anderson in his support. His reason for pressing this disease upon the notice of the profession, is the fact that when once recognized as a pustular eczema—an ordinary impetigo—and treated as such, it may and generally does last for a long time, not yielding to the remedies usually employed for eczema and its allies. He describes the disease as often epidemic, varying in severity both as regards general and local manifestations at different times. It is pyrexial, markedly uniform as to its eruption, which is at first coarsely vesicular, the vesicles or minute bullæ being distinct and separate, quickly enlarging into flattened bullæ, which are replaced by flat yellow crusts. The mucous membranes are not unfrequently implicated, vesico-pustules developing upon them, especially those of the eye. The disease tends to run a definite course. It is contagious, the secretion furnished by the eruption being capable by inoculation of producing the disease in unaffected and healthy subjects. He found no difficulty in treatment, which consisted of a weak ammonio-chloride of mercury ointment applied to the ulceration beneath the scabs. It certainly alters the character of the secretion, which is no longer inoculable, and disappears rapidly. Internal remedies avail but little. Occasionally salines are needed at the outset, and tonics in weakly and strumous subjects; but as a rule the ointment suffices for all purposes.

We have never seen such a disease *sui generis.* It corresponds to what in old days would have been called *impetigo larvalis.* We cannot, of course, deny its existence, but the inoculations reported are not strong enough proof for us. Pick and Reder obtained similar results from inoculation from simple scabies pustules. We hold with Auspitz that the existence of *impetigo contagiosa* must be further determined before accepted as proved.

ECTHYMATOUS PUSTULES AND BULLÆ

Are found with many cutaneous troubles as results of inflammation, injury, or irritation. They may be due to internal or external causes. The word ecthyma does not convey to our mind the idea of a distinct or separate disease, but only the phase or appearance of some affection in which the skin exhibits ecthymatous bullæ or pustules, large or small. As to treatment, a good step in advance has been made in the common-sense way of looking at pustules of whatever size, namely, that they are local abscesses, and the rules of surgery for these apply to the former.

RUPIA.

Large, thick, dirty, more or less conical crusts, not from burns and not psoriatic masses of epidemis, are always due to *syphilis.* This Hebra long ago insisted on, and like all truth, it is gradually fighting its way into belief. As, therefore, it belongs to syphilis, we for reasons above stated pass it by. Wilson lately agrees with Hebra; the other English and French authors still recognize a non-syphilitic rupia.

PEMPHIGUS.

The several very interesting cutaneous diseases now included under this name have recently been more or less carefully observed by one and another. It would seem as if we must admit an ordinary form, *pemphigus vulgaris*, and quite a different one, *pemphigus foliaceus*. Neumann gives four species, whose names explain their differences: 1st, *p. benignus* in children, lasting six to eight weeks, and not returning; 2d, *p. malignus* or *cachecticus*, fatal, croupy exudation forming over the cutis when the bullæ burst; 3d, *p. gangränosus*, described by Stokes as occurring among poor children of three years or under. Bullæ appear behind the ears or on the hands and feet, gradually confluent with others close by, and a sphacelus forming, death occurs in ten or twelve days. Neumann, however, suggests the name *purpura scorbutica* as more in accord with the morbid process. 4th, *p. pruriginosus*, great itching with only small vesicles, destroyed by scratching. Vesicular formation also on the mucous membrane of mouth and fauces, and when bursting, leaving excoriated spots.

Pemphigus bullæ contain at first serum, then pus or sometimes blood. Their contents react neutral, later weakly alkaline. At first the cells of the rete Malpighii are lengthened out so that the bullæ seem fan-like in structure (not, however, so marked as in burns, where Biesiadecki found these cells quite thread-like); later the whole bulla is filled with fluid only. Chemical analysis of the bullæ and of the urine does not explain the cause of the disease. And pathological anatomy has but in one instance found amyloid degeneration of the liver and spleen.

The result of many shrewd observers careful record shows that quinine checks the fever preceding an eruption, and also the eruption itself. Iron, arsenic, etc., are of no use. Water in baths, packing, etc., tar ointments and tar baths, emollient salves on the surface, and powdering it over, are what afford relief if not cure. Hebra reports no good from internal remedies. With continued baths, *i. e.*, the patient kept under water night and day, he obtained an apparent permanent cure, after respectively 100, 76, 47, and 26 days' immersion.

We here omit, of course, all mention of syphilitic pemphigus, merely again saying that constitutional syphilis imitates on the skin, pemphigus, as it does almost every other true cutaneous affection. The brief sketch we have above given of non-syphilitic pemphigus, although so meagre, yet constitutes our present knowledge of the disease. Etiology, pathology, and even the anatomy of the affection, are so little understood that any reported cases throwing the slightest light on it are worth bringing together.

Hardy noticed pemphigus like bullæ after copaiba ordered for gonorrhœa. The eruption lasted six weeks. Copaiba is eliminated by the perspiration, or rather the sweat is saturated with it, and this drug as we know affects the skin in a peculiar manner. There was in his case cutaneous anasarca.

Malherbe reports two cases: one produced by external irritants and ending fatally, hardly perhaps to be called pemphigus; the second, a case of chronic pemphigus terminating fatally by intestinal perforation. The author thinks these ulcerations of the intestine are like those seen in extended burns of the cutaneous surface.

Luithlen reports a case of hæmorrhagic pemphigus in a new-born infant, which he states was not syphilitic. But the mother had "scrofula of the bones and general cachexia." The child was born August 10th and died September 14th.

Steiner gives a clinical study of pemphigus in children. He holds that the disease exists as an acute one in children. Chronic pemphigus as seen in them corresponded to Hebra's *p. vulgaris; p. foliaceus* he never saw in children. He attempted inoculation with the contents of pemphigus bullæ, but obtained only such results as would be by inoculation with any pus. His observations taught him to believe that a pemphigus existed with children not of syphilitic origin, and he holds that without some other symptoms of syphilis a case of pemphigus in infants cannot be held to be of specific origin. He found the course and result of pemphigus in children to depend on whether it was acute or chronic, and on the condition of the patient. Acute pemphigus ran its course in two or three weeks. Chronic pemphigus lasted months or years without affecting the patient otherwise. Twelve of his fifty-seven patients died, and of these twelve, seven had syphilitic pemphigus, four p. cachecticus, and one p. pyæmicus. Post-mortem showed only signs of hereditary lues or general atrophy, nothing definite to explain the pemphigus itself. As to treatment, Steiner can give us nothing different from that above spoken of.

Pribram describes very carefully the clinical and post-mortem appearances of a case of febrile pemphigus in a phthisical young man of 17, where death from tuberculosis occurred during the eighth week.

Köbner discusses the existence of an acute pemphigus, from which, however, we gather nothing new of pathology or treatment.

Thomas reports a case of acute pemphigus in a child 1½ years old. There were several complications in the case, and he says the patient had been formerly under his care with a more chronic form of pemphigus. This case, therefore, like many others reported, fails to absolutely decide the question of an acute pemphigus, *i. e.*, not chronic or returning.

Klein reports a case of severe pemphigus, lasting during the better half of pregnancy and rapidly recovering after confinement. Such cases have also been observed by others.

Steffen reports having seen an outbreak of acute pemphigus at Stettin, seven cases together in a children's hospital, and one in private practice. He therefore believes against Hebra that an acute pemphigus does exist. Six of the patients died. We think, however, what was observed should rather have been called, "some epidemic disease with pemphigus-like bullæ."

Chatagnon reports a case of chronic gastralgia being followed by acute pemphigus. Erysipelatous patches were covered with large bullæ. Desquamation occurred in large thick scales, particularly on the palms and soles. Again we rather question the correctness of calling such an affection pemphigus. There are, of course, many cases of cutaneous appearances accompanying other diseases which are reported as pemphigus. Those we have spoken of are such as seem of most importance.

MILIARIA AND SUDAMINA

Are now pretty generally considered not to be cutaneous diseases, but symptoms of some definite general disorders. Except to be referred to, they are gradually being dropped from lists of diseases of the skin.

PRURIGO.

Considerable advance has been made in the pathology and treatment of this formidable disease. But before we speak of these, it is absolutely necessary to explain that by *prurigo* we mean a distinct disease, and that the word *pruritus* does not convey the idea of a disease, but only expresses that there is itching. We have *pruritus* or itching in prurigo. These two words have recently been so carelessly and unscientifically misused, that attention must be called to it here, otherwise we may be misunderstood. Fox in his clinical remarks is obliged to again warn against this mixing of these two terms, which from their sounding alike are constantly interchanged, whilst in reality one means a fortunately rare disease, and the other designates a common symptom. Teachers of dermatology on both sides of the water have made repeated protest against it. It would, of course, be out of place for us here to say more than that in accordance with the highest and best authorities, we mean in this article by *prurigo* a disease, and by *pruritus* simply the sensation of itching.

In no dermatological work we know of will there be found more good strong common sense than in the five-and-twenty pages Hebra devotes to prurigo in his book on cutaneous diseases, which a year or two of study and observation at his clinique will satisfactorily prove to any one. *Pruritus senilis*, and *pruritus* or itching of this or that part of the body, either from hyperæsthesia or the presence of this or that animal parasite, Hebra carefully separates from the distinct and fearful disease prurigo, that from Willan and Rayer's time has been recognized, but under which also, by those observers and their followers and imitators, has been classed the, so to speak, true *pruritus cutaneus.* Under the title of prurigo there have been many articles written recently, which, upon the slightest glance, will at once be seen refer to *pruritus cutaneus*, due to some of the above-mentioned causes. Notice of these, therefore, we of course omit, at least for the present.

True prurigo, as seen and described by Hebra, is a fearful and incurable disease, apparently extremely rare in this country as well as in England, but by no means so in France, or especially in Germany. Hutchinson, Milton, Fox,—all three English dermatologists, are uncertain whether they have ever seen Hebra's true prurigo in England, and almost doubt its distinct existence. Wilson has seen and understands it.

At from five to seven years of age the little patient will begin to show small subepidermal papules, rather recognizable by the touch than the sight. They are always isolated, and constantly leave some regions unaffected. These itch intensely, and the necessary scratching removes the epidermis, showing a little fluid, or, if the papilla has been wounded, then a drop of blood, which dries to a black crust. From henceforward the disease increases and the further changes due to never-ceasing scratching, are, pigmentation up to almost negro blackness, thickening, roughness, dryness, and furrowing of the common integument. There will naturally result pustules and excoriations, with enlargement of the glands, particularly the inguinal. Examining a patient with prurigo, we find the head free, the hair dull and dry, the face but rarely affected, but pale and unhealthy. Worse on the extremities, but never perceivable by sight or touch in the arm-pits, elbows, flexor side of wrists and palms, groins, hams, and soles. The disease at times simulates many others, especially eczema, scabies, lice, and it requires a practised eye and careful exclusion of one after another of these to diagnosticate the complaint. At its height the whole complex of symptoms is very striking and definite.

Neumann describes these papules above spoken of as consisting of circumscribed cell-proliferations in the papillæ, accompanied by an exudation, not extending to any elementary form, which elevates the epidermis. The rete and epidermis are more developed and pigmented. The pointed cells described by Schrön and Schultze are abundantly developed. These last are seen in patients with excessive epidermis or epithelial growth. The papillæ and cutis are enlarged and thickened with connective tissue; the outer root-sheath strongly developed, and the hair-follicle with club-like distention. Further study of the cutaneous nerves must decide whether an anatomical change in them may cause the disease.

Derby, under Biesiadecki, studied the anatomy of several cases of prurigo, and reports as the result of his examination: 1st. That there exists in prurigo an affection of the hair. From the outer root-sheath there is a prolongation composed of epithelial cells, which thrusts itself between the separated fibres of the *arrector pili.* 2d. The *arrectores pilorum* are largely developed, and their pulling on the hair causes it to stand more vertical, goose-skin, besides favoring the bulging out of the inner sheath of the hair-follicle and the outer root-sheath. 3d. Finally, a serous exudation takes place near the hair thus diseased or abnormal; this permeates the tissue of the corium and papillæ, exuding a clear or sanguineous fluid on puncturing the papule. Hence is explained why the prurigo papules do not appear on hairless spots, as the palm and sole, rarely also on the flexor surface of the extremities where the hairs are very few and scattered.

As to the treatment of true prurigo, we can, of course, only learn from those under whose care it has come. The result in both the French and German schools has been to show that the disease is incurable, but temporarily relieved by treatment. Rayer long ago said that except in a few cases in which the constitution of the patient may need special attention, he would recommend external treatment exclusively. With this Hebra agrees, saying, "external remedies alone are of any use in prurigo." These remedies are, however, but few, being the same employed in psoriasis, scabies, chronic eczema, lichen ruber, et cetera; namely, those which, so to speak, *reduce* the skin quickest—water, hot and cold, in all the various methods of applying it, soft soap, sulphur-ointments like Wilkenson's, Vlemingkx's sulphide of lime, baths of corrosive sublimate, the various fats or oils, as cod-liver oil, the tarry compounds, as oil of cade, ol. rusci, and lastly, carbolic acid. The details of the use of any and all of these are, of course, not in place here, since we are but to indicate where and how progress has been made in pathology and treatment.

URTICARIA.

There has not been much advance made either in the pathology or treatment of this disagreeable complaint. It has been called a neurosis, but so have several other diseases, which does not advance us. Here and there cases have been reported where some definite cause could be seemingly assigned for its appearance different from those hitherto regarded as likely to excite it. Failu has published a well-written pamphlet on urticaria, being a prize essay on this disease, which he well calls "La plus singulière des maladies cutanées." Nettleship reports a case in a little girl two years of age. The urticaria was first noticed when the infant was three months old, and it has continued. Pigment blotches have resulted on the spots where it was most abundant, namely, the neck and trunk. The London Hospital Reports speak of two cases, one in a boy, the other in a man æt. 44, accompanying erysipelas of the face.

Dumontpaltier reports a case of intermittent urticaria where the attacks returned each night for six weeks. Rheumatism and asthma prevailed in the family. The children suffered from intermittent diarrhœa, alternating with urticaria.

Wilson reports cases associated with rheumatism, from uterine trouble and from mental shock. Gubler reports a case of urticaria coming on the third day of small-pox. It lasted three days, during which time the variolous eruption remained stationary. Jütte describes as *urticaria hæmorrhagica* a case where itching, red wheals or blotches appeared, some one-half to one inch in diameter. The redness increasing in a few hours, subcutaneous hemorrhage occurred, and the exudation passed through various changes of color. Willan and Rayer have called this *purpura urticata.* Fouquet saw five cases of *urticaria tuberosa*, swellings the size of a walnut or hen's egg, of whitish color, appearing especially on the extremities of women, lasting a day, and disappearing with slight epidermal desquamation.

Villan describes as *urticaria evanida* two distinct forms, one that appears spontaneously and rapidly vanishes, whilst the other is called out only by rubbing or energetic muscular action; this last form he never saw associated with the first. Writing with a blunt point a name or figure on a skin disposed to this affection, and corresponding raised sharply defined wheals appear. This muscular sensibility is more or less present in all people, but may arise to a positively morbid condition, so that even washing with a sponge brings it out. The wheals are caused by contraction of the cutaneous muscles. Chloroform and ice prevent their formation and relieve them.

Manteggazza speaks of a new alimentary nervous excitant called *guarana*, something like chocolate. It comes from Brazil. In the human subject it seems to produce, in large dose, sometimes slight strangury and urticaria.

ERYTHEMA.

Much the same in reference to pathology and treatment must be said of this disease as of urticaria. It is nevertheless now better understood how the affection produces such different appearances on the skin as concentric rings or segments of circles, that it may also appear as papules, that it comes where two surfaces rub together, and that it may cause very large tubercles or lumps, all of which quite different symptoms are due, perhaps, to the same unknown cause. The idea is gaining ground that the erythemata, for instance, *erythema iris* in circles, is connected with, or may be regarded as, less developed *herpes iris*. Erythema in a peculiar form has been noticed in large numbers of cholera patients.

Hutchinson saw a case of *erythema annulare* (herpes iris) in a boy æt. 5, where the attacks recurred in three successive years. A rather more doubtful case, *i. e.*, whether it could be considered true *erythema multiforme*, was in a lad æt. 15, where the trouble repeatedly occurred for fifteen years after vaccination, and where over some points vesications were developed.

Bohn attempts to prove that *erythema nodosum* and *pur-*

pura rheumatica are caused by the same process. He holds that every nodule in erythema nodosum is due to a circumscribed hemorrhagic inflammation, an inflammatory infarctus of the skin caused by an embolic process in the finer cutaneous arteries. As he could find no disease of other organs (as heart or arteries) to account for this embolus, he refers it to embolic formation by blood and fibrine clots in the patient's blood. He goes on to show how purpura rheumatica is not to be connected with rheumatism, but much rather allied to erythema nodosum, dependent on this embolic process. He also explains away by this theory the generally received views of some dermatologists in reference to the rheumatic character of purpura rheumatica and even of erythema nodosum.

Huët, under the name of *erythema papulatum uræmicum*, describes a peculiar eruption, appearing very often, if not constantly, in uræmic poisoning, and of prognostic value. Numerous papules show themselves, surrounded with more or less halo, or on an erythematous portion of the skin. They come all over the body, but especially at first on the palm and sole, fore-arms and face. They do not seem connected with sebaceous or sweat-glands, as they are no more common where these latter exist in abundance. These red papules are sensibly elevated to the touch, last but a few days, and flatten down, the halos spreading wider and wider till they meet, and thus form a large erythematous patch. After about two weeks a slight desquamation occurs. These light red spots change to a darker red, violet, and finally blue-black. The injection disappeared on pressure of the finger; now it no longer does so, and we have petechiæ. Itching he noticed in but three of the fifteen cases. After death the spots disappear, except the petechiæ. Once he noticed vesicles in the erythematous spots. These appearances he saw in uræmic poisoning, in the last stages of Bright's disease. He regards it as an uræmic symptom, and connects it with the kidney degeneration in chronic parenchymatous nephritis. Of 224 cases under his care during seven years, 123 died, and among them this eruption showed itself 19 times, *i.e.*, in 15 per cent. of the fatal cases. He recognizes and makes a careful distinction between this and what Fuchs called *cnesmus vulgaris*.

HERPES LABIALIS, OR BETTER, FACIALIS.

This affection is now recognized as accompanying febrile diseases. The groups of vesicles will also be seen on the mucous surface of the mouth and pharynx. As to whether such herpetic eruptions in febrile diseases are of good or bad augury, authorities differ. They of course are not of special interest to the dermatologist. Similar sorts of herpetic eruptions occur in otherwise perfectly healthy persons on the forehead, lids, nose, and ear; and in young persons, at certain definite periods of the year, herpetic eruptions recur with febrile symptoms over the extensor surface of the elbow and knee-joints, and after a few days similar groups of vesicles show themselves on the cheeks or perhaps other parts of the body. These facts, if not new, are now at least settled by recent clinical observation.

Not much light has been thrown on the pathology or treatment of this form of herpes. Nothing has been gained by calling every case of it by the name of a quite different disease, *herpes zoster* or zona. Wilson observed a case of bilateral herpes liabalis accompanied with catarrh and slight stomatitis. The locality of the eruption would, if it depended on it, imply irritation of the dental branch of the inferior maxillary in the right side, and filaments of the infraorbital branch of the superior maxillary on the left side. He mentions a case where repeated attacks, every four to six weeks, of herpes, occurred in a lady æt. 28, on the nose, but the vesicles, so to speak, aborted, coming only so far forward as to form a blotch. Another case was where a tender tooth in the upper jaw, second left bicuspid, after inflammation, seemed to be the cause of an herpetic eruption on the skin of the lower lip, close to the mucous border.

Bertolle reports cases of herpes of the soft palate, in which, during perfect health, there was suddenly fever, severe headache, difficult swallowing, raised pulse, and hot skin. On the first to second day the pharynx and tonsils were very red and swollen, and the latter covered with miliary yellow spots; occasionally these were seen on the soft palate or gums. They never appeared on the posterior pharynx, and even in Motet's case no vesicle was seen *beyond* the isthmus faucium, although in this the lips and cheeks were studded with herpetic eruption, and finally also the extremities. The vesicles are not confluent—leave a flat ulcer that quickly heals. When herpetic eruption follows on the commissure of the lips and nose, it indicates rapid termination of the trouble and quick recovery. In women it appears about the menstrual period, or when the menses are delayed or suddenly checked.

Gerhardt explains the origin of herpes facialis thus:—The small arteries which run in the bony canals next the fine trigeminal twigs, become at the commencement of the febrile attack contracted, and during the hot stage again dilate, so as to press on the nerves and irritate them, hence a vesicular dermatitis. He thinks h. facialis occurs between the chin, ear, and eyebrow.

HERPES PROGENIALIS

comes, as is now agreed, on all parts of the penis, and on the female external genitals. It is simply ridiculous to attribute it to venereal, or to contact with venereal sores or discharges. Many a perfectly chaste male or female will have repeated attacks of it for years. Whether, when the disposition is present, the irritation and excitement of coitus tends to call it forth more often, is an open question. It has nothing to do with any form of venereal disease. When the crusts fall off, after the vesicles dry up, there is sometimes quite a little ulcer, which, when irritated by walking, etc., assumes the appearance of a chancre, and *time alone* can decide between them. Of course those who suffer repeatedly from herpes progenialis are more likely on contact to take chancre or syphilis, or both, because they have a number of excoriated spots denuded of epidermis.

Recurrent h. progenialis has been here and there noticed, and Doyon, in a recent monograph, proves he has seen it very often, and understands its periodicity, etc. With true French instinct, however, he attributes its cause to a *dartre* constitutionally, and a venereal sore locally. That it occurs and is more likely to be noticed in those with venereal, is true, but plenty of observations prove it has nothing to do with that disease. In the sulphurous and chloro-saline waters of Uriage, Doyon thinks will be found the best derivative, alterative, and tonic treatment needed; but a sojourn of many weeks is required for several successive years. He is medical inspector of these waters at Uriage.

As to the treatment of herpes progenialis we are but little advanced, except to know that nothing will prevent it; and all irritating substances applied to the surface after the vesicles break, serve to render them more like ulcers and hard chancres, to the annoyance of patient and physician. To bring herpes progenialis and *cold sores* under *herpes zoster*, or call it a neurosis, is no advance, but simply tends to confuse student and teacher.

HERPES ZOSTER, OR ZONA,

is a disease which has been known and suffered from for ages, but what at present concerns us is, that its pathology has recently been studied and its treatment attempted. It remains, however, still a "game we do not understand." New facts about it are, that it has been now seen on all the different regions of the skin from the head to the feet, on the inside of the nose, and on the tongue. It has been noticed to occur repeatedly in the same individual. It not very infrequently appears on both sides of the body at the same time, and then perhaps not over corresponding nervous tracts. It affects one side of the body as often as the other. It is more common in April, May, October, and November. It may occur as early as at five, seven, or ten months; is not uncommon in children. It may be accompanied or followed by paralysis. It may leave lasting or permanent neuralgia, and that of an intense character. It may be followed by dangerous sloughing, and finally in the aged it may cause fatal prostration.

When affecting the ophthalmic nerve it has naturally attracted the attention of ophthalmic surgeons who have especially studied it, and report that it may greatly injure or destroy the eyeball. The disease seems sometimes to be almost endemic.

We have thought it best to give this little sketch with the references to establish the statements, rather than encumber ourselves with quotations from the various authors it is culled from. A single etiological point is Mr. Hutchinson's idea that zoster may at times be called forth by arsenic.

We have made a pretty thorough study of what has been written in reference to the etiology and pathology of zoster, and our index holds all the authors' names and articles indicated, but it would be too long a list to introduce here. Such men as Barensprung, Bohn, Thomas, Vernon, Hutchinson, Bowman, Emmert, Weidner, Johnen, Gerhardt, Hebra, Woakes, and many others, have dissected, studied, speculated, and theorized over this nosological riddle, and we have done the same with what they have reported, but fairly give it up. We have, however, arrived at this conclusion, namely, that the same cutaneous, morbid appearances may be called by irritation of the cutaneous distribution of a nerve or by irritation of its terminal connection with the nervous centres. We agree with Mr. Hutchinson, that whoever may succeed in unravelling the mystery which at present surrounds zoster, must at the same time make a discovery in physiology.

As to the anatomy of zoster, some light has been thrown on its apparent erratic appearance by Voigt's minute dissections of the terminal distribution of the cutaneous nerves. He has shown that tracts of skin that we thought zoster should not have invaded, are in reality supplied by prolongations of the nerves we recognize as implicated.

Biesiadecki found the papules and vesicles were formed in the same way as in eczema. When pustules form, the cell elements increase in the papillæ and permeate the whole corium and a part of the subcutaneous cellular tissue. The papillary blood-vessels are enlarged and crowded with blood. From the papillæ spindle-shaped cells push into the mucous layer, they subdivide, pushing apart the epithelial cells, as series of round cells. The epithelial cells are thus compressed and seen lying vertically towards the epidermic layer as slim threads. In the centre of the pustule there is a considerable cell-proliferation, and collections of pus are found in the mucous layer in a network composed of the compressed and altered epithelial cells of the middle and upper mucous layer. The epithelium of the lower mucous layer takes part also in the process by subdivision, often mother-cells holding several nuclei, lying above the flattened and cell-infiltrated corium, but here and there reaching into the network. The network passing through the pustules consists of the epithelial cells pushed asunder and compressed, of the middle and upper mucous layers, and the cells of the sebaceous and sudoriparous follicles. Both take part in the formation of the pit or scar. Around and in the neurolemma there is evident cell-proliferation in herpes zoster, like the similar proliferation in neuroma and carcinoma around the trunk.

Every remedy found to relieve even a single case of zoster is an advance in treatment, and should therefore be here recorded, since the physician's repertoire and the patient's endurance is likely to be sorely tried. A physician suffered six weeks with severe neuralgia after zoster on the trunk, and reports finding relief from painting the parts with a solution of iodine and collodion, and taking the syrup of iodide of iron internally. This "acted magically." He continued with citrate of iron and quinine, and soft extract of opium and belladonna smeared on the parts where the zoster had been.

A writer reports having seen numerous cases during the hot summer of 1868, and he recommended painting the vesicated patches with flexible collodion, as the cleanest and most effectual means of preventing the rupture of the vesicle, and suitable at every stage of the disorder, even in cases where superficial ulceration has taken place.

Crepinel says that he found great benefit in the treatment of zoster neuralgia by applying chloroform and oil (one part to five) several times a day, increasing the proportion of chloroform with the severity of the pain. The remedy to be used at as early a stage as possible.

Chegnon records an instance of the good effect of blisters in arresting zoster and preventing the persistency of the distressing neuralgia. Chaussit also thinks blisters are most useful. Forget finds that blisters do not hinder, but may even promote the eruption, but they are one of the best means to relieve the succeeding neuralgia. Bandon recommends smearing the affected part early with a solution of chloride of iron mixed with laudanum.

Bowman, in one case, relieved the persistent neuralgia after *h. zoster ophthalmicus* by dividing the supraorbital nerve and subsequently the branches of the infratrochlear.

At present, of course, besides opium plasters, we have subcutaneous injections to fall back on. And those who have experienced in themselves or witnessed in others the sometimes fearful pain of zoster, will readily grasp at anything to obtain or give relief. On the trunk, where there will be motion of the skin, application of unstimulating plasters in large pieces gives some relief by steadying the parts and preventing dragging. We omit here, of course, all the list of remedies tagged on to the account of zoster in nearly every book or monograph, so often apparently simply copied from one to another.

HERPES IRIS AND CIRCINATUS,

the latter being a change of form of the former. We spoke of the suggestion made by Hebra, that *h. iris* was perhaps only a further development of *erythema iris.* He has seen both on the same patient. In regard to the time of the year when most prevalent, their involution, duration, etc., it seems highly probable this is the case, and then *h. iris* and its form, *h. circinatus* (*i. e.*, when drying up in the centre), can be removed from the herpetic class to the erythemata. We have nothing new to report as to pathology or treatment.

INCREASED AND DIMINISHED SEBACEOUS SECRETION.

It has now finally been generally recognized that wherever sebaceous glands exist in the skin, they may either secrete too much or too little of their product, or that product may appear of abnormal consistency. Thus a too great flow of sebum, and its collecting on the surface, *imitates* over the common integument several other cutaneous affections, such as eczema on the head, pityriasis rubra on the body, gonorrhœa on the genitals, etc. Cases have been reported by Biett and Bazin of universal seborrhœa, also by Schrimmer; the openings of the sebaceous glands all over the body being stopped up, forming tumors the size of a hazel-nut or larger. Our present knowledge of the use of fats and soaps enables us to treat these cases with a certainty but recently obtained. Martin recommends corrosive sublimate, grs. viij., glycerine, ℥ j., aq. rosæ, ℥ iv., to be used where the openings of the sebaceous glands are stopped up.

Diminished sebaceous secretion, of course, renders the skin dry, hard, and rough, and its place must be supplied by oils and fat. It is an accompaniment of *elephantiasis Græcorum*, *sclerema adultorum*, *prurigo* (not pruritus), *ichthyosis*, and *lichen exudativus ruber*. Wilson has made a special disease of it, *xeroderma*.

COMEDO

has been recently, by Virchow, abundantly proved to be a distended sebaceous follicle, whose contents projecting above the surface of the skin becomes black from dirt, and these when pressed out assume the shape of a worm, still only too often supposed or declared to be the true parasite which inhabits the sebaceous glands, the *acarus folliculorum*, concerning which we are apparently no wiser now than when Simon told us of its existence many years ago.

MILIUM OR GRUTUM.

These are also distended sebaceous glands, covered only by a thin epidermal layer. The little tumor contains epidermis cells, crystals of cholesterine, and chalk. Wagner reports a case where the milium contents were colloid. In ordinary milium there is fatty degeneration of the epidermis cells; in the latter, colloid degeneration. The yellow spots, called by Wilson *vitiligoidea*, are apparently due to collected sebum.

MOLLUSCUM CONTAGIOSUM.

A distended sebaceous follicle may so increase as to form wart-like excrescences or pedunculated cutaneous tumors up to the size of a fist. These may be limited to any one portion of the body, or quite general over the surface. Upon the contagiousness of these growths there has recently much been said on both sides. More recently Bärensprung, Virchow, Rindfleisch, Hardy, and Hebra have declared most emphatically that the disease is contagious, generally starting from children. Neumann, Wilson, Duckworth, Ebert, and others have not succeeded with inoculation, and therefore deny its contagiousness.

Virchow found on section of a molluscum, a glandular structure, with sebum collected between regularly radially-grouped cylinder cells. The soft mass consisted of epidermis cells and fat.

The necessary treatment has been found to be quite simple, namely, cutting off or pressing out these tumors, and, perhaps, applying some caustic to the gland wall.

MOLLUSCUM FIBROSUM.

Fagge and House dissected the integument of a woman æt. 40, dying of another disease, who had molluscum fibrosum, and found, first, that each tumor is originally developed around a hair-follicle, enclosing at the same time the sebaceous glands belonging to the follicle. Second, that the smallest tumors consist of two distinct elements: a central glandular structure, itself surrounding a hair, and a peripheral mass of very fine connective tissue containing numerous minute oval nuclei. Third; that the glandular body is a sebaceous gland, enlarged by the separation of its sacculi from one another, and perhaps, also, by the actual multiplication and increase in size of the sacculi themselves. Fourth, that the peripheral mass of nucleated connective tissue is developed from the two external layers of the dermal coat of the hair-follicle and sebaceous glands. Dr. Fagge, therefore, thinks the name "molluscum fibrosum" more appropriate than Virchow's and others' "fibroma molluscum."

LUPUS ERYTHEMATOSUS SEBORRHŒA CONGESTIVA.

This name was given by Hebra and by Cazenave to a disease occurring on the face most generally, in blotches on the two cheeks connected over the nose, and resembling common lupus in appearance, very obstinate to treatment, and not amenable to that which cured common lupus, for which it is still frequently mistaken. Hence the importance of the recent advance made in its pathology and treatment.

Hebra, since the publication of the letter-press of his atlas, describing the portraits there given of *l. erythematosus*, has had opportunity of examining the cutis microscopically, and in his book he decides that the disease in reality is due to a special change in the sebaceous glands and their secretion. This idea was also substantiated by Geddings and by Neumann's researches. More recently, however, Neumann has seen, examined, and described a case of *l. erythematosus*, in which not only the face but also the palms were affected; and as there are here no sebaceous glands, Geddings' conclusion that the disease arises from the sebaceous glands cannot be considered positive.

Auspitz described *l. erythematosus* as collections of circumscribed infiltrations, more on the surface, as distinguished from the cell masses in *lupus vulgaris* that fill the whole depth of the skin.

Wilson has given his ideas in reference to lupus erythematosus, and reported fifty-six cases, which do not all seem to belong to this disease. One at least is spoken of as *lupoid chilblains*. He says the disease occurs in weakly people, especially with women. On the fingers the swelling is particularly noticeable, on the face the scaly formation, and on the ears and the scalp the atrophy. The patency of the follicular opening he explains by these being thrown into relief by the absorption of the papillary layer of the skin of the interfollicular space. The pores are large and dilated, distended with epithelial exuviæ of a yellowish or grayish tint of color, and often the dry and horny exuviæ stand up prominently from the mouths of the follicles.

He recommends arsenic, iron, and cod-liver oil internally; locally, carbolic acid, solution of nitrate of mercury, of caustic potash, tinct. iodine, iodglycerine, ioduret of sulphur ointment, white precipitate, and acetic acid. As this list shows, he regards this disease as a tedious but curable one.

Kohn reports the results of his special studies of lupus erythematosus in Hebra's wards, and gives his views of the pathology of the disease, agreeing with Hebra, Biesiadecki, Neumann, and Geddings, that it is due to trouble in the sebaceous follicles. He does not, however, mention Neumann's discovery of lupus erythematosus on the palms (above referred to), although he says it may occur there. We omit giving the histological details of either Geddings or Neumann, since they are evidently at present not conclusive. Kohn admits that the disease occurs especially in patients with so-called scrofula, swollen glands, chlorosis, etc.; but he saw it in perfectly healthy persons. Therefore internal treatment may be necessary, but external local applications are alone to be depended on. He gives a very valuable account of each and all of these as used in Hebra's wards, including the above list from Wilson. The indications are to remove the accumulated sebaceous secretions by oils, soap, etc., and the application of caustic potash, a drachm to two of water, concentrated acetic acid, carbolic acid, iodglycerine, sulphur as paste, arsenical paste, and mercurial plaster, with which last he has obtained, perhaps, the best results on the whole.

Wardwell reports in two cases astonishing success from lemon-juice given to the extent of that of three lemons daily.

Geddings explains the practical application of the means of removing the secretions and the application of the stimulating ointment, etc., as above

ACNE DISSEMINATA

is still the bane of the dermatologist. Prof. Virchow says that when an irritative process is set up around a hair-follicle by the retention of its secretion, and assumes a true inflammatory character, "there result the various forms which, since Willan's time, have been commonly associated by dermatologists under the name of acne. According as the filled and occluded hair-follicles produce more or less severe effects on the surrounding tissues, the character of the acne will differ. When the occlusion is superficial the follicles appear in the form of comedones, and *a. punctata* is the result. When it lies deeper, and the neighboring structures swell, when the blood-vessels become dilated and varicose, and when pustules appear, we call the appearance *a. rosacea.* Lastly, when the skin becomes thickened, *a. indurata* is produced." Neumann says acne consists in an inflammation of the vessels surrounding the hair-follicles and sebaceous glands, causing a collection of exudation in the cutis tissue (Simon). The hair-follicles and sebaceous glands are here at fault, the sebum plug prevents further discharge of the secretion, and thus gives rise to inflammation.

As to treatment, we cannot resist quoting Prof. Hebra, who says: "When we read the sort of treatment recommended in dermatology, we might conclude that nothing is easier than to remove a follicular inflammation which deforms the human skin, and to banish acne from the face where it so sorely tries the vanity of youth. But as soon as the measures which are so much vaunted come to be tried in practice, we are quickly forced to the opposite opinion, that there are few tasks more difficult than to get rid of divers forms of this disease. "I must confess that, in spite of many efforts, I have not yet succeeded in finding a remedy by which acne can be prevented from developing itself, or *quickly* got rid of when once established."

Soap, sulphur, ioduret of sulphur, mercurial plaster, etc., so long used by dermatologists, are still employed. It requires, of course, study and experience to use these intelligently. But all good authorities acknowledge and their patients agree as to the usefulness and necessity of proper and continued treatment. Treatment has advanced, in that the ridiculous ideas of the past as to diet of one kind or another being necessary, fats or no fats, alcohol or not, etc., have given place to much more common-sense views. Here and there lately one or another has recommended what they have found successful in particular cases, and we introduce them here, but always under the shadow, so to speak, of the quotation from Hebra above given. Ferrat recommends nearly what Hardy used at the St. Louis hospital, corrosive sublimate locally, also astringents of alum and peroxide of iron, or proto-iodide of mercury. Ross says that after watching carefully a case of acne he found that the same follicles inflame and re-inflame at successive times, and he therefore advises a small incision to be made through the skin over the follicle, and a fine capillary tube charged with strong nitric acid to be applied. The acid penetrates the follicle, but does not burn any portion of the skin beyond the circumference of the tube. Gabler reports surprising success in *acne punctata* from glycerine, given in doses of two dessert-spoonfuls per diem. His idea is that it traverses the sebaceous follicles, and thereby modifies their secretion.

ACNE ROSACEA.

Pathology recently rather points towards considering this disease as not belonging under acne or troubles of the sebaceous glands and hair-follicles, but as really a formation of new vascular and connective tissue, and therefore, although it is often associated with acne disseminata, it is properly to be classed among the *new growths.* Clinical experience has shown that although frequent in good-livers and wine-bibbers, it is not necessarily restricted to them. Certain cases of *acne rosacea* can be traced to causes of a more or less definite kind, but in other instances we can discover no condition to which the disease can with any probability be attributed. In both sexes, and at all periods of life (except, indeed, during childhood), it often enough appears, without the slightest ground for ascribing it either to drink (in male patients) or to disorder of the uterine or sexual functions (in females).

As to *treatment ;* in the first degree sulphur, long ago recommended by Alibert, is still used in the form of soap, wash, or ointment. Avoidance of heat and cold and irritation of the skin, regulation of the kind and amount of food. In the second degree, with extensive vascularities and even large excrescences, it is essential to destroy the dilated veins, or at least render them impervious. The quickest way of effecting this is to make a number of incisions with a sharp narrow bistoury or cataract-knife, so as to cut the dilated veins longitudinally, particularly those of which the loops are plainly visible, being gorged with blood. The blood should be allowed to flow for a little while, and the parts should then be touched with a brush dipped in *liquor ferri perchloridi.* In the third degree the nose has greatly altered in form, and enormously increased in size, although the bones and cartilages remain unaffected. Even in such a case one can cut off as much of the thickened and hypertrophied skin as may be necessary to reduce the part to a bearable condition.

Mesterten has given more or less the same form of treatment above noticed, and which has long been in use. Guibont gives an account of treatment of *acne rosacea*, consisting of punctures with a lancet and stimulating applications, the success of which is readily explainable from the above description of anatomical relations found by histologists. Want of intercommunication between the foreign schools naturally causes many things to be rediscovered.

ACNE MENTAGRA, OR SYCOSIS,

is due, so recent pathology teaches, to pus in the hair-follicle and cell-proliferation in the neighborhood. There is at present a diversity of opinion as to its cause. Gruby, Bazin, Hardy, Anderson, Köbner, and Michelson hold to its parasitic origin. Wertheim attributes it to the hair being too large for the sheath. Hebra, Neumann, and of course Wilson, deny parasitic origin to sycosis. Others agree that we may have more or less the same cutaneous appearances from simple inflammation of the hair-follicle, and also produced by the presence of the vegetable fungus, which, when it is present, Hebra and Neumann hold to be the same as that of herpes tonsurans.

Treatment of this disease, whether parasitic or not, has advanced considerably over the old Roman method of burning the face with hot irons. Epilation of the hairs, shaving, and stimulating applications, as soft-soap, sulphur paste and soap, and weak red precipitate ointment, will readily cure this once formidable complaint, and therefore we may cease to administer internally any of the long list of drugs formerly used, whose names still lumber up the chapters on sycosis in many books. Stewart reports success with the saturated solution of nitrate of potash, applied three or four times a day according to the amount of pain.

LUPUS VULGARIS.

Certainly since the days when the worn-out wood-cut of cancer of the face in Druitt's Surgery gave our students the idea that such was the effect of lupus, both pathology, and more especially treatment, have materially advanced. Many an otherwise poor wretch, both male and female, may now thank Prof.

Hebra that the treatment he long ago showed to be so successful has restored them to society, mutilated perhaps by the disease, but still not so revolting in appearance as to deprive them of opportunity of earning a livelihood or of associating with friends and relatives. A knowledge that cod-liver oil internally and thorough application of solid nitrate of silver externally will cause lupus to heal up with scars only simulating burns, has by Hebra's work been some time spread abroad amongst medical men. Certainly it is a great pity that an equal knowledge of the exact and only successful method of applying this caustic has not been disseminated as well. Without personal observation of this latter it is but seldom carried out as it necessarily must be. Want of success on this account explains the contradictory accounts the journals are full of, and the reasons why so many internal remedies are used and recommended. It is a little curious to see success reported wherever the solid nitrate sticks were used (Purdon, Milton), or a caustic treatment most allied to it, either with or without internal treatment, for instance by the use of chromic acid, arsenical paste, or acetate of zinc. Moreover, one after another, as they get hold of what Hebra does and says, find they also can do the same. Mistakes from not separating *lupus vulgaris* from *lupus erythematosus* (a very different trouble), and also from mistaking *specific lupus* for lupus vulgaris, readily explain unsatisfactory results.

Besides the good results of cod-liver oil and iodide of potash internally and nitrate of silver externally, Hebra lately furnishes us with his success with galvano-caustic in lupus tuberculosus, hypertrophicus, and serpiginosus. When the proper method of using this has been understood and followed, the same success has been met with. Its more rapid action greatly recommends it, a single application being equal sometimes to twenty of solid nitrate. Lupus itself must be understood by one who uses galvano-caustic for it. Coolidge gives an account of its method of use. Carbolic acid for the lighter forms of lupus maculosus and tuberculosus has been lately used with success and found to be a powerful caustic. It acts, however, differently from nitrate, beyond the spot touched, and rather mummifies the tissue than destroys it. Here we must leave the treatment and hasten to the recent advance in the pathology of this disease.

As lupus is gradually more and more studied and understood, the desire naturally enough showing itself here and there to make varieties of simple stages or varied appearances, is being resisted, and observers are settling down to following those who have *shown* the best results, not simply reported them.

Till quite recently the external anatomical appearances have been alone described; now we have microscopical examination from Berger, Pohl, Wedl, Auspitz, Rindfleisch, and Neumann. The last sums up our knowledge by saying that the primary trouble in lupus vulgaris comes from the cutis, and not, as in lupus erythematosus, from the sebaceous glands. The cell-proliferation pressing to the surface causes the appearances we have in lupus maculosus, tuberculosus, etc. When this cell-proliferation reaches inwards, it causes from the commencement increase of tissue. The changes are in general these. The cells of the rete Malpighii exhibit granular contents or fat granules or pigment, the corium is succulent, thicker, the papillæ broader, the meshes larger than in the normal skin. In this is a net-work of fine connective tissue fibres. The cutis is uniformly filled with groups of roundish or oval cells. The subcutaneous connective tissue is thicker, the fat cells scarce or quite absent. The sudoriparous glands are present, blood and lymph vessels dilated, sebaceous glands scarce. Papillæ larger but much broader, though here and there quite normal. A similar infiltration occurs in the subcutaneous cellular tissue. Cohn's results of microscopic examination of lupus hypertrophicus must be compared with this description also.

ANTHRAX.

Reverdie has lately examined the causes of the special gravity of anthrax and furuncle of the face. He concludes that anthrax and furuncle have a special danger, due to their being readily complicated by phlebitis. This phlebitis of the face is fatal by propagation to the sinus of the dura mater, or by becoming a source of purulent infection. Anthrax of the lips more than of other parts of the face is likely to be complicated by phlebitis; this is explained by the peculiar texture and structure of these parts. Anthrax of the lips is perfectly distinct from malignant pustule. Phlebitis invading the orbit, shown by the exophthalmos, is an almost certain proof of invasion of the sinus. Incision made as quickly and extensively as possible seems to be the best method of preventing, and sometimes of arresting the complication of phlebitis.

Pritchard recommends, with Physick and Travers, the treatment of anthrax by caustics. The centre is to be burned with caustic potash; from a fourth to a third of the whole induration must be destroyed. He also uses iodine dissolved in collodion.

MALIGNANT PUSTULE

needs the knife and caustics at once, to stop its fatal result, according to the majority of observers. It is a disease more likely to come under the surgeon's hands, and is pretty generally treated of in systematic works. We therefore here but mention three special recent monographs by Raimbert, Ganjot, and Bourgeois.

BOUTON D'ALEP, DE BISKARA, DES ZIBANS, ETC.

according to Polak, is a new connective tissue formation occurring on the outer commissure under the eye-lid, cheek, tip of nose, lips, and especially on the lower extremities. It attacks European strangers, and is endemic from Aleppo to Bagdad, but also seen in Cyprea, Cairo, Suez, and Teheran. Natives have it from one to seven years and strangers at any age. It comes but once during life, as a red spot, gradually changing to a broken-down papule. The edges of the ulcer when formed are thick and infiltrated, the granulations become ichorous. After eleven to fourteen months the ulcer clears and cicatrization occurs. Applications of sulphuric acid are recommended. There are repeated notices of this peculiar form of ulcer scattered here and there in recent medical literature.

Groeschel and Rigler have contributed to our knowledge of bouton d'Alep, and in Algeria the same form of ulcer is frequently described under the name of bouton de Biskara, des Zibans. A comparative study of the Aleppo boil and that seen in Africa is given by Hamil with the bibliographical account. Treatment recommended was, emollients during the inflammatory period of ulceration, mercurial and belladonna ointments, and diachylon plasters. It seemingly runs its course under any and all treatment.

These forms of ulceration have been shown to be quite distinct from what has received the name of *Mozambique* ulcer.

RODENT CANCER AND ULCUS HOMA

have been particularly described with cases by Moore and Zedelhoff respectively. They come, perhaps, more properly under general surgery than dermatology.

HYPERTROPHY AND ATROPHY OF THE SKIN.—SCLEREMA OR SCLERODERMIA.

Enough cases (over 40) of this rare disease have already been reported in the various journals to make quite a book, and we forbear, therefore, giving the references. Walter reports an anatomical examination of the skin. The microscopical results of Neumann, Arning, and Förster have varied. There has been seen increased pigment, hypertrophy of the elastic tissue and of the connective tissue.

Sclerema neonatorum has also been microscopically examined, and connective tissue proliferation found by Förster and by Löschner. Chevreut found in the blood two coloring matters not belonging to the gall-coloring matters, indicating a change of coloring matter which Henning has shown to resemble indigo.

Fagge shows that Addison's keloid is the scleriasis now so often noticed. Lombroso reports in detail a case he calls *makrosomie*, strongly resembling sclerema. Here, also, Warren's histological examination of true keloid should be mentioned.

Rhino-scleroma.—A peculiar new formation has been seen by Hebra in already nine cases. It occurs on the nose, upper lip, forehead, and cheek, very like a syphilitic sclerosis of the prepuce. There is a hard ivory-like feel to the part, the color varying from normal to dark reddish-brown. It progresses slowly, and has no pain. Kohn's examination showed it to be a cell-infiltration of the upper layers of the corium and the whole papillary body. Hebra places it next granulation sarcoma (Virchow); when it stuffed the nostrils, he reduced it with caustic potash, and there was no return.

Cutaneous horns are here and there but rarely reported. One in a peculiar position is reported by Shaw on the eye-lid.

Neumann describes a retrograde process in the cutis of old persons, whereby the fibrous bundles of the cutis quite disappeared, and for them was substituted a homogeneous mass much resembling coagulated size. Nerves and vessels seem to have quite disappeared, and as little was to be found of the other adnexa of the skin. The whole cutis was greatly thinned, and the tissue of the specimen cracked both longitudinally and transversely, possibly due to the preparing, showing, however, great brittleness. These are similar changes to those seen by Lindwum and Buhl in a case of hypertrophy and ulceration of the skin with amyloid degeneration; by Weber in the vessels of the skin of the face; and by Bärensprung at the bottom of an indurated chancre. These degenerations start from the vessels, and hence indicate a severe disturbance of nutrition of the whole organism.

These glassy swellings Weber regards as hyaloid *degeneration*. According to him, it starts from the finest arteries quite genererally, and later spreads to the parenchyma cells of the special organ affected. The epithelium of the arteries is first affected, and from this the whole arterial wall, which thus becomes homogeneous. The process leads to narrowing of the diameter of the tube. The other tissues soon follow the arteries. Weber thinks that the protoplasma itself is changed, special substances being brought to it with the blood, which are at the same time the excitors of the abnormal change of the protoplasma. Further research is needed to clear up the origin of this change of the epithelium in the arteries. First, whether the epithelium cells of the finest arteries are really the points of starting, since in similar processes in other organs it is quite clear that they commence outside of the inner lining, whereby the latter is pushed inwards in the form of a protuberance, necessarily reducing the size of the vessels, for example in the arteries of the brain.

Wilson has seen and described some cases of false cicatrices or linear atrophy of the skin. These are also described by Wilks.

Vernois has published a pamphlet in which he gives the several portions of the body in which callosities will be found, according to the occupation followed, and also the stains, marks, etc., on the hands of workmen. This is of some value in a medico-legal point of view.

HYPERTROPHY OF PIGMENT.

The discoloration of the skin accompanying what is known as Addison's disease, should perhaps be here mentioned, although the affection belongs more properly to clinical medicine. Martineau has recently given a resumé of what has been written on this disease, and introduced some cases, including their anatomy and pathology. Except as simulating some, it hardly belongs among cutaneous affections.

The subject of *chromidrosis* has recently attracted attention, and cases here and there been seen by competent observers. Mericourt published a memoir on it, in which Robin's chemical examination of the material secreted is given. Robin states that it is not a substance foreign to the human organism. Its character proves it to be a species of coloring material analogous to that which, long known as *cyanourine*, colors the urine in certain morbid conditions a bluish-brown to black.

Foote relates two cases, and tabulates the reports of thirty-eight others so far observed. Chemical analysis showed the coloring matter to be allied to the indigo compounds. The theory of coloration in chromidrosis is, that the indican exists in the blood in certain unhealthy conditions. It is colorless and soluble, especially in an alkaline fluid. The indican is secreted by the sudoriparous glands, still colorless. It is now dehydrogenated, and finally oxidized (according to temperature, etc.) into brown or blue-indigo. The indigo-red does not seem to be formed. When the blue is very abundant and deep in color, it appears black. In blue coloring of the lids the urine showed by test no color. Dermatologists have thus proved by the chemist's assistance, that the skin does excrete certain coloring matters.

Jeannin wrote a thesis on the cutaneous pigmentation in pulmonary phthisis, in which he shows that consumptives often exhibit pigment spots on the face resembling those of pregnant women. He thinks the absence of hemorrhages in such patients noticeable. As to the nature of the pigment, one theory supposes is to be fatty pigment, and another that it arises from decomposed hematine.

Smith has communicated an article on morbid pigmentation of the skin, in which he states what is known and theorizes concerning these coloring matters. He forms a chromatic scale with indigo from the urine at one extremity and hæmato-crystalline at the other.

Atrophy of *cutaneous pigment* takes place not only in constitutional diseases, such as elephantiasis Græcorum, etc., but it has been repeatedly observed in the colored races when the patient was perfectly healthy, and on those parts of the body exposed to the sun. Of its cause we seem to know nothing new.

Hypertrophy of the cutaneous *appendages*, the *hair* and nails, can be, perhaps, hardly considered a disease, yet the excessive growth of the former in unnatural positions, is an exceedingly disagreeable trouble both for the patient and the physician who attempts to get rid of it. A number of cases have been recently collected by Beigel, many of them, so to speak, historical. We have nothing new to report in reference to the pathology or treatment of excessive formation of hair or of its malposition, of which there are several curiosities reported. What was called *plica Polonica*, and supposed to be excessive and peculiar growth of the hair of the scalp, is at present known to be due to tangling of uncombed and unwashed hair on unwashed heads, matted together by secretions and excretions as well as additional foreign dirt. Hamburger has gone through with the subject quite exhaustively, and disposed of it as has every other dermatologist.

ATROPHY OF THE HAIR.

Curious cases are reported of sudden partial or total loss of hair from the head or body. Todd reports complete loss of hair of the head and body resulting from a fall on the head and concussion of the brain. Wilson reports cases of loss of hair from deranged innervation, apparently hereditary in some cases. Loss of hair from deranged innervation has also been noticed by Romberg, Ravaton, Simon, and Murray.

There is a form of seborrhœa of the scalp, accompanied by falling out of the hair, well described by Alibert and Hebra amongst others, which Pincus has, however, recently more closely studied. He has also seen it in a lad of twelve years. He distinguishes pointed hairs not showing the end cut by the scissors, not over two inches long, found towards the borders of the scalp; they grow slower, and last from four to nine months, whilst those hairs showing mark of the shears, or the long hairs of women, last from two to four years. By absolute count and examination he found a constant relation between them, and their daily dropping off stood 1.17, 1.15, and 1.9, etc. In this alopecia the relative number of pointed hairs dropping off is increased, although the total loss may be the same. This is the test as to whether the first stage of alopecia is coming on, which is characterized by the decrease of the growth in length. The second stage is characterized by a decrease in the thickness of the hair. These examinations of Pincus are extremely interesting, and explain what is considered as premature baldness. In the first stage treatment is of avail, but seemingly not so in the second. It consists in the use of various stimulating lotions and ointments.

The circumscribed loss of hair called alopecia areata (Hebra, Neumann), porrigo decalvans (Willan), alopecia circumscripta, or area celsi (Fuchs), alopecia occidentalis (Wilson), vitiligo capitis (Cazenave), phytoalopecia (Gruby), etc., has, since the discovery of vegetable parasites, been generally reckoned among the fungous diseases; but more recently this has been disputed by many good observers, who could not find traces of spores. Neumann, Bärensprung, Hutchinson, Veil, Boeck, Scherenberg, Rindfleisch, Duhring, Pincus, Drysdale, et alii, refuse from observation the fungous origin, whilst others hold to it from equal microscopic examination, having found the *microsporon andonini.* Whether a fungus is the real cause of this form of circumscribed loss of hair, *but* is only found at certain stages, yet remains to be determined. Treatment consists in most energetic irritation of the skin.

That the continued use of arsenic causes a gradual alopecia which is recovered from on stopping the medicine, has been long known, but recent observation of Wyss shows that a *circumscribed* loss of hair, a true alopecia areata, may occur from arsenic.

Spiess speaks of a peculiar loss of hair from atrophy of the bulb, by which the nutrition of the whole hair is perverted. The part next the bulb undergoes a change and exhibits air spaces. If the root is atrophied, the hair readily falls out or breaks off close to the skin, where the air spaces render it thinner and brittle.

Neumann speaks of a peculiar alteration of the shaft of the hairs of the upper lip and arm-pit. Two, three, or more sharply defined swellings encircle the hair. At these the hair cracks in handling, and by pulling breaks up, looking as if singed. Neumann could only find under the microscope the cortical substance fibrous, but no foreign substance. In one case, however, he saw *psorospermia*, such as Lindemann found in a girl's hair who had suffered a long time from headache, and which Lebert also found in the hair of a patient with *favus*. These have been found in the liver, and Neumann considers their nature unknown, although others regard them as a further development of the *gregarines*.

Beigel describes a similar knot-like swelling he attributed to collections of air. Neumann refers them to want of due nutrition of the hair shaft, as he has seen the same in sycosis. Rapid drying of the cortical might cause them. The fatty acid of the sudor of the arm-pit could also produce this result.

ATROPHY OF PIGMENT IN THE HAIR.

Blanching, from advancing old age, is, of course, due to lack of pigment formation; but *sudden* blanching, or partial loss of color in the hair, has now been several times observed, and its cause, to a certain extent, ascertained. Landois found the sudden blanching to be due to the presence of air in the medulla, and sometimes also in the cortical portion, without interference of the natural pigment. Wilson related a case where the hairs were alternately white and brown in bands, and would explain it by the brown being the growth of the day and the white that of the night; but Landois examined some of the hairs from the case, and showed the white rings were longer than could possibly grow in twelve hours. Brown-Séquard observed in his own beard sudden blanching of the hairs, *i. e.*, within less than twelve hours.

As Neumann says: "How the air gets into the hair is still a mystery." He subjected black hairs to a pressure of thirty atmospheres under an air-pump for several months, and could find no change of color under the microscope, or any signs of air in them. He also could produce no change of color by pumping air into the hollows of the hedge-hog's quills. Moreover, the hairs of some animals, as the rabbit, have the medullary canal partly filled with air and partly with cells, yet there is an *uniform color.*

We have thus given a running sketch of what has been recently discovered as to pathology and treatment of hypertrophy and atrophy of the skin, and its appendages, the hair and nails. It seems, however, proper to briefly mention some anatomical results of practical importance which have been lately published.

Biesiadecki has in the Vienna Academy Reports contributed largely to our knowledge of the anatomy and physiology of the skin. Meissner published a valuable monograph on the papillæ, nerves, vessels, and sense of touch in the skin. Langer gives some interesting observations on cleavage, or separation of the fibres of the skin, on thrusting sharp instruments through it. By drawings he shows what the general direction of the fibres in various parts of the integument is, and how cuts made in one or the other direction would close or gape on stretching. Important points medico-legally. He also published observations on the power of stretching of the skin. Wertheim reported his researches on the structure of the hair-follicle, deducing some practical points as to the growth of the hair.

Goette has published an extensive monograph on the morphology of the hair. In this he concludes that in man, and probably in all hairy animals, there are two kinds of hairs distinct in their development and growth, and different in form. The first are those generally recognized with a hair-bulb and an inner sheath, whilst the second grow independently of a papilla, ending in club form and without sheath, hitherto identified with a retrograde metamorphosis of the former. The laws of growth of both kinds are in general the same throughout, independent of species, age, etc.

VEGETABLE PARASITES OF THE SKIN AND ITS APPENDAGES.

The last few years have not added a great deal to our knowledge of the pathology and treatment of those affections of the skin due to the presence of the vegetable parasites. Except among such unbelievers as Wilson and his imitators, it is now pretty generally conceded that the following fungi are found in and on the skin and its appendages:—

1st. The achorion Schönleini in *favus.*

2d. The tricophyton tonsurans in *herpes tonsurans.*

3d. The miscrosporon furfur in *pityriasis versicolor.*

4th. A fungus in the *nails,* in parasitic *sycosis,* and in *eczema marginatum.*

It is under the fourth heading that recent investigation has given us new information. A fungus has repeatedly been found in the nails, by Meissner, Gudden, Virchow, Ripping, Bazin, and Wagner. Specimens of these last cases were microscopically examined by Neumann, who delineates the fungus found. Virchow and Meissner consider the fungus as probably identical with that of favus.

With regard to sycosis it is admitted that whilst there is a form of follicular inflammation simulating parasitic sycosis, yet that this latter does exist. The question is still in abeyance as to whether parasitic sycosis always takes its origin from herpes tonsurans, as held by Bazin and Köbner, also Michelson and Neumann, whose microscopic results, however, we will not here introduce. Panturri sums up his results of the study of sycosis thus: Phytosykosis is directly due to herpes tonsurans; it is still contagious after all appearances of herpes tonsurans have disappeared. The parasitic is found in the hair piercing the pustules and papules, and around it. It is identical with the fungus of herpes tonsurans. Phytosykosis has morphological, clinical, and anatomical characteristics distinguishing it from idiopathic sycosis or *folliculitis barbæ.*

Hebra does not believe in the parasitic nature of sycosis, as also of course Wilson. Nayler and Hutchinson are unbelievers. Anderson's microscopic results convince him of the presence of a fungus in parasitic sycosis.

Eczema marginatum is the name Hebra gave to a peculiar form of cutaneous eruption occurring mostly on the scrotum and adjacent part of the thighs, and spreading outwards so as to cover such a space as the reinforcing of cavalry pants usual does, coming up in front to the navel. It also appears in the arm-pits. The name he gave it explains its appearance. It was very rebellious to treatment. We need not here dwell on the special characteristics of eczema marginatum, which are in reality those of herpes tonsurans vesiculosus combined with intertrigo.

Köbner in 1864 was the first to show the presence of a fungus in this disease, upon which it depended, and that the fungus was that of herpes tonsurans. This was quickly substantiated, amongst others especially by Pick, naturally combated by Hebra, but finally acknowledged by him; only he holds that it is not identical with herpes tonsurans in a clinical point of view at least. Neumann's summary is that in existing intertrigo a fungous growth may change it to eczema marginatum. A fungous disease when present, herpes tonsurans or pityriasis versicolor, favored by locality (*i. e.* complicated with intertrigo) may develop into eczema marginatum. In the early stages of the disease the fungus is almost never absent; when the affection has lasted for some time it generally is not found. The fungus found can be cultivated into *pencilium glaucum* or *tricothecium.* These results, except the last, are in agreement with Pick and Köbner's researches, of which they are the continuations.

Two points in reference to *favus* lately discovered should be here mentioned, namely: Pick found a true favus crust on the glans penis, and on the most careful examination he could not detect any hair whatever. This therefore stands against Bazin's assertion that favus may appear on all parts of the body except where there are *no hairs.*

Simon speaks of what has not been previously noticed, namely, atrophy of the skull over places where favus had existed. How this can take place is difficult to conceive of, since the skin was perfectly movable over the atrophied portions of the bone.

Paxton noticed a parasitic condition of the hairs of the axilla, which proves to be what Hallier has described and considers to consist of threads of *leptothrix*, anastomosing so as to form a fine net-work.

Hebra's clinical experimentation and experience induced him to think that all the parasitic diseases were due to one and the same fungus, the differences observable being dependent on the stages of development, influenced by the age of the patient and the seat of the affection. In this Hebra is supported, also, by the clinical observations of Pick and Köbner. We do not propose to enter the discussion here, as being foreign to this article; but it is proper to state that Hallier, pursuing the same inquiry from a purely botanical point of view, entirely confirms these observations of Hebra, Pick, and Köbner.

In reference to the treatment of vegetable parasitic diseases, we must say, as in reference to so many other cutaneous affections, namely, that the number of specific remedies proposed and advocated, are hardly surpassed by the number of writers who have had something to say about them or themselves. We are, however, not very much ahead of the pretty successful methods of ease and treatment suggested long ago, when the true nature of these troubles was ascertained. The internal and external use of carbolic acid has naturally been recently tried, and Neumann says in reference to its effect in preventing the germination of the lower vegetable organisms, that it has this power, but must be used much stronger than generally spoken of. A solution of $\frac{1}{500}$ to $\frac{1}{300}$ must be repeatedly used, or the less frequent application of a very concentrated solution of the acid.

ANIMAL PARASITES OF THE HUMAN SKIN.

Our knowledge of the anatomy and physiology of the human animal parasites has been recently much increased by the researches of Bourgignon, Gerlach, Furstenberg, Hebra, Gudden, and Landois. They have not naturally so very much contributed to our pathology and treatment of the cutaneous affections caused by the presence on or in the skin, of these animal parasites. An important and interesting anatomical point has been noticed by Landois, who has given an exhaustive description of the human pediculi, very perfectly illustrated. In his brief historical sketch closing the articles, he expresses himself as believing possible the fearful stories of persons infected with *swarms* of these vermin, which have now and then been reported and as often doubted. As an anatomist, he has shown the possibility of the existence of the so-called covered lice ulcers, spoken of in these cases. He says that the lice do not eat their way through the skin into the subcutaneous cellular tissue, but bore in by their sucking apparatus. There is nothing remarkable in an animal that breathes by tracheæ thus living under the skin. Among the fleas, the pregnant female flea passes most of her life under the skin in which it has bored, and there lives as a parasite. The same is the case with the acari. Nitsch found in a king-fisher *hypoderas ispida* under the skin, and, in a pelican, a still larger species of acarus under the skin of the breast, as also Ehrenberg in an ibis, and a *dysporus sula* in some other bird.

We can now also better understand the existence of those immense tumuli of the *sarcoptes hominis*, first noticed by Boeck and Daniellsen in their work on Leprosy, in 1848, and since occasionally seen by European observers.

Gull, and later Fagge, have advised, as a means of diagnosis of scabies (rather a method of finding the animal), to examine the detrita of the cuticle and accumulated crusts. Under the microscope, ova, young acari, and detrita of mature ones, are seen. Boiling in a solution of caustic soda dissolves the epidermis, and leaves the acari and ova untouched.

Treatment of all the animal parasitic troubles has advanced, in that there is a more general recognition of the frequent occurrence of head, body, and clothes lice; and here and there praiseworthy attempts are made to establish the truth, that they cause *pruritus*, or itching, which has nothing to do with a fearful disease above mentioned, namely, *prurigo*. Confounding these two words has led to evident confusion between the two distinct diseases.

The old methods of treatment so long employed at the great hospitals in Europe, where thousands of patients with scabies are annually treated, as also at the military hospitals through which the recruits and soldiers with itch pass from the immense standing armies, have gradually been adopted over the world, no matter whether the acarus was forgotten or remembered, found or escaped detection. Those dermatologists who had large civil practice as well as hospital work, learned that the treatment so quickly successful on a thick-skinned peasant, would not do for the common integument of a delicate child or female, a large number of whom constantly come under his hands for cure of scabies. Therefore, nowadays, in killing the sarcoptes hominis in the cutis, we have to take into consideration the patient's age, sex, duration of the trouble, vulnerability of the cutaneous surface, and its special condition at the time of cure. In other words, had we any means of at once killing every acarus on the body, there would still be left an eczematous condition requiring continued and careful treatment. Moreover, in curing the itch we must break down the epidermis, and thus get at the insect beneath, to destroy it. But remedies which will do this also greatly irritate and temporarily increase the eczematous condition. Hence the aim of treatment is to find what remedies will kill the acarus and at the same time heal the eczema, or artificial irritation caused by the constant scratching. This has been Hebra's study, and that he has been very successful is proved by his treatment being followed all over the world, and already so long that it is not recent, although very many physicians seem still unacquainted with it. White has given an ample *résumé* of it, as also Anderson and others. Hebra's book gives it in extenso.

Lately what was previously recommended has been more thoroughly carried out, namely, the use of some of the balsams and gums in killing the sarcoptes hominis. Burchardt attributes the first recommendation of the use of balsam of Peru to Dr. Boeck in 1853. The time taken in his methods of treatment was too long. Dr. Gieffers was more successful with this gum in the Charité Hospital at Berlin. Bärensprung then took it up there, and Burchardt reports the results of an improved method of use. The patient is to rub himself with the balsam in the most thorough manner (upon which the result depends) from chin to toes, especially those places where the itch mite seeks its living.

Pastan first recommended *styrax liquidus* for scabies, and Schultze compares this with balsam Peru. Pastan's mixture is 1 styrax, 1 ol. oliv. Schultze's, 4 styrax, 1 spr. vini rect, ½ ol. oliv. twice rubbed in during twenty-four hours suffices, but every crack and crevice of the skin must be included. Styrax does not spoil the linen and does not smell bad. The patient is not to wash till after the treatment.

Fröhlich has lately tried balsam of copaiba, which he says requires four to six rubbings, the patient taking no bath during the two or three days necessary for this.

The use of these remedies with women and children whose skins are too tender to bear what will act more rapidly, is a gain in treatment. But it must not be forgotten, as the practitioner will soon find out, that these as well as petroleum, recommended by Decaisne, do not cure the cutaneous irritation or *eczema* that remains after all acari are dead, and which requires careful treatment, especially in children and women.

We have to notice three diseases generally spoken of in complete works on dermatology, which properly belong to general medicine or surgery.

Elephantiasis Arabum, as it exhibits itself in enormously enlarged limbs, scrotum, and labiæ, is now by general consent handed over to the surgeons who lately have certainly been quite successful in their treatment by the knife, or by ligature of the arteries feeding it. We therefore omit all further mention of it here.

Pellagra also belongs not at all with cutaneous medicine, although the morbid appearances on the skin are so striking. Even if we should go over the very large recent literature of this curious malady, there would not, unfortunately, be any very great advance in pathology or treatment to report. To general clinical medicine we therefore leave it.

LEPROSY, OR ELEPHANTIASIS GRÆCORUM,

belongs, also, rather to general clinical medicine, although it is spoken of in works on dermatology. Since Boeck and Daniellsen's great work on leprosy as seen in Norway, which was published in 1848, there has been much written on elephantiasis Græcorum as observed in various parts of the world. A series of replies to Virchow's circular appeared in his Archiv. Boeck and Daniellsen also have continued their researches, and some are contained in their work now publishing on diseases of the skin, where the results of dissection and microscopic examination of the nerves and internal organs are more perfectly given. Their results tally in general with the more recent ones, of Virchow, Köbner, and Simon.

A peculiar hardening of the skin in leprosy which resembled another affection, Neumann had opportunity of lately seeing. He found the papillary layer considerably raised, the whole cutis appearing thickened. The tissue is supplanted by cells which swell but little with acetic acid, so that only here and there fibrous connective tissue is seen. The fatty tissue is similarly destroyed. The seat of the change is in the corium, where over considerable extent are seen at first scattered *colloid cells*, with a more homogeneous, highly refractive substance (colloid degeneration). In the upper parts of the corium layers are met with consisting simply of aggregations of colloid globules. Strong bundles are also seen passing from below upwards, which more careful examination showed to be hypertrophic smooth muscular fibres. The lanugo is everywhere present in its apparently unaltered sheaths, often bent at an angle or in S-shaped tortuosities, and reaches deep into the corium. The sebaceous glands are generally destroyed; on the other hand, there are follicles enlarged and filled with horny epidermis and dried sebum. These are seen in considerable numbers.

The non-contagiousness of elephantiasis Græcorum seems to us now established, and such is the report of the College of Physicians to the British Government, which gives the most extended replies from observers all over the world, but of course more especially in the English possessions in India.

All these studies and general dissemination of knowledge in reference to elephantiasis Græcorum, serve to ameliorate the condition and better the care of the poor leper. Art, however, has not found out his cure. Prof. Boeck says, in reference to the immigration of leprosic Norwegians, which also applies to the Pacific Islanders and Chinese coming to our shores, that he believes leprosy will disappear amongst the Norwegians in the United States, or will only be found in isolated imported cases. It will not be transmitted from generation to generation as an epidemic disease. Prof. Boeck is now studying the effect of change of climate and living on those affected with leprosy among the Norwegian colony in Minnesota.

As of special value to know we would here say that—

Berg has published a useful little book for reference, as a "Compendium of Diseases of the Skin," in which the synonymes are given and the tabulated systems of Willan, Biett, Biett and Alibert, Lebert, and Hebra. Among the host of names given to cutaneous diseases at one time and another we all are sometimes puzzled to know which is really meant, and here we are most likely to quickly find it.

Auspitz has published a pamphlet on "Soaps and their Action on the Sound and Diseased Skin," of value as describing all that are used in the Vienna school.

The results of the use of *carbolic acid* internally for diseases of the skin as seen in Hebra's wards in Vienna are given by Kohn and by Neumann. Externally used it is, of course, like tar in its action. Internally, in doses of from six to nine grains daily, it reduces hyperæmia, diminishes the quantity of epidermis formed, and acts upon the peripheral nerves in such a way as to overcome the itching. As a parasiticide we spoke of carbolic acid above.

We have thus given what have seemed to us the most important recent advances in the pathology and treatment of diseases of the skin. All this, however, by no means expresses the great advance dermatology has made, as shown by its recognition at the medical schools where now it is specially taught. It is a satisfaction for us to be able to say that at the best medical schools almost everywhere, the graduates now know infinitely more about cutaneous diseases than they did ten years ago, and hence a corresponding advance in pathology and treatment. Dermatology, like other branches of medicine, has been, and is, greatly hampered by many so-called treatises, monographs, and journal articles issuing from self-taught and unobservant specialists in cutaneous medicine. A great deal of French dermatology, and the larger part of English and American, represent but the gradual discovery on the authors' part of what Germans like Hebra have taught and published, or else are almost simple reproductions of the masters' lectures. To this we would not in any way object, if the masters' hands and brains were only as carefully acknowledged as they are easily recognized. The great standard works are, however, gradually being translated from one language into others, and will in time assert their authority by their self-evident truthfulness. We must, however, always remember that dermatology, like any other specialty, is not contained in any single treatise, nor does it come from any one teacher.

It is almost impossible to so describe a disease of the skin as to be perfectly understood even by those familiar with cutaneous appearances. Hence has always been felt the necessity of attaching to classic works series of portraits of the patients whom the author has had. How this has been done in past time by Willan, Rayer, Cazenave, and Wilson, is pretty well known and understood by the profession at large. How this is *being* done seems not to be so well understood. Prof. Hebra is gradually issuing a series of portraits of his patients, drawn from paintings in water-color from life, absolute copies from nature, to which nothing is added nor is anything subtracted. As he says, no matter what of new may be found in pathology and treatment, yet these portraits must remain truthful delineations of disease as it exists in nature, and therefore always of value. Many of these pictures are repeated by the New Sydenham Society, and others added that are thought of more practical value to English practitioners in the series they are publishing to accompany the translation of Hebra's work, the first volume of which is translated into English, and part of the second is out in German. There never have been any plates published which simply delineated the patient with his disease just as he sat down before the artist, and only such wonderful talent as the lamented Elfinger had, ever gave such life-like and true representation. An artist cannot copy unless he perfectly understands what he is copying.

Of more limited usefulness, except for teaching, are the truly wonderful colored casts recently made in Paris, which in reality present the patient directly to you. For lecturing they are, perhaps, even better than the patients. They cannot, of course, be at hand where the practitioner may consult them, as he can turn to his portfolio of plates to refresh his memory.

To the surprise of all, photography has quite failed in endeavoring to represent cutaneous diseases. It has been now pretty thoroughly tried, and the result is most unsatisfactory. We must agree with a shrewd observer and truthful recorder, Mr. Jonathan Hutchinson, that without color the photograph shows little or nothing of the disease; and if hand coloring is put on, you at once destroy the special value of a photograph, its absolute accuracy as to detail. The test is this: Can you say what the disease is from the photograph without the name attached to it? We have repeatedly failed. Moreover, to a large number of those published the real name of the disease photographed is not appended, but some other one. Hence photographs of cutaneous diseases have not been received with any great favor by professed dermatologists. As placards they, of course, serve a special purpose for both artist and doctor.

Advance in the pathology and treatment of cutaneous affections should certainly now be more rapid, since besides the standard works gradually appearing, there are special journals published in German, French, Italian, English, and American. All but the English are devoted to syphilis also. An interchange of knowledge becomes much more rapid, and useful results are more quickly disseminated. The German journal, undoubtedly, stands the highest as to the weight and character of its articles. The French, Italian, and American seem at present more especially devoted to syphilis. Excepting a few articles, the English *Journal of Cutaneous Medicine* seems now, as before, more especially devoted to twaddle, which should not be the case in a country where Hutchinson, Fox, and Anderson live and teach.

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Clinical Contributions.

CASE OF RUPTURE OF THE URETHRA FROM CONTUSION OF THE PERINÆUM.

RETENTION OF URINE—EXTERNAL PERINEAL URETHROTOMY WITH CONDUCTOR.

BY J. W. S. GOULEY, M.D.,
Surgeon to Bellevue Hospital.

Thomas B——, aged 33, was admitted into Bellevue Hospital, April 10, 1871. This man was suffering partly in consequence of a debauch of twenty days' duration, and from the effects of a kick he had received in the perinæum on the day previous to his admission. The injury was followed by a smart hemorrhage, considerable pain, and by retention of urine. When I saw him (about twenty-four hours after the accident), he was on the verge of delirium tremens; his bladder was distended up to the level of the umbilicus, and he was making violent and painful efforts to relieve himself, but was rewarded by the escape of only a few drops of bloody urine. Several attempts had previously been made to reach his bladder with metallic instruments, with no other result than that of making a tolerably long false passage. The patient was so tremulous, and his urethra had become so sensitive, that it was with the greatest difficulty and delay I could make the necessary exploration. I found the obstruction to the passage of a moderate-sized gum bulbous bougie at five and three-fourths inches from the external orifice. This exploration, though conducted in the most careful and gentle manner, was followed by a gush of blood. I then made several trials with olive-pointed and other gum catheters, large and small, but failed utterly to reach the bladder, and finally had to resort to capillary spiral whalebone instruments, one of which, in half an hour, entered the bladder; over this delicate bougie I slipped a No. 8 tunnelled gum catheter, through which I drew off two and four-fifths pints of urine. The catheter was then retained in position and the end plugged. The nurse was directed to draw some urine every four hours. Notwithstanding this successful catheterism, I advised external urethrotomy, but, owing to the critical condition of the patient, concluded that it would be more prudent to defer the operation for a couple of days. A hypodermic injection of morphia solution was administered, and he was left for the night.

April 11. He has had some sleep; is less tremulous; his pulse is full and regular; he is free from pain, and takes readily a plentiful allowance of milk, beef-tea, gruel, and eggs. On removing the plug, urine comes freely away from the catheter.

April 12. During the night of the 11th he disarranged the catheter, which could not be replaced by the attendant, and had to be removed; after this the patient was unable to pass his water. It was during my visit at half-past one o'clock on the 12th that I became acquainted with what had passed on the previous night, and, thinking further delay inexpedient, I had the patient at once prepared for the operation. He was thoroughly etherized before I proceeded to catheterism, which was accomplished, with very little delay, by means of the spiral capillary whalebone bougie as conductor for the tunnelled and grooved catheter staff. The patient having been placed in the lithotomy position, a free external incision was made, and by successive cuts the urethra was opened longitudinally in the median line from a point half an inch anterior to the injured part, extending as far as the apex of the prostate; the catheter staff, guided by the capillary bougie, was then introduced into the bladder, and the urine drawn off. The hemorrhage was inconsiderable. A free outlet for the urine having thus been established, the patient was beyond the danger of infiltration. A careful examination of the parts revealed the extent of the injury; besides extravasation of blood in the surrounding tissues, the bulb was in a pulpy state and torn completely across near its anterior extremity, the ends were retracted and nearly half an inch apart. No. 16 sound was then introduced into the bladder and immediately withdrawn. No catheter retained. After recovering from the anæsthetic the patient became violently delirious. Twenty-five grains each of hydrate of chloral and bromide of potassium were administered, but without effect. Straight jacket.

April 13. Is not so wild, but has still to be confined. Nourishment is freely given, together with four ounces of whiskey daily. Urine passes freely through the perineal wound.

April 14. Is better and more quiet, in consequence of having slept last night—under a dose of chloral and bromide of potassium. Twenty-one grains of quinine three times a day.

April 15. Is perfectly rational to-day. Appetite good. Diluent drink. No. 12 sound.

April 18. Diarrhœa. Perineal wound of a dirty greyish appearance; it is syringed daily with a weak solution of carbolic acid.

May 4. Condition of patient rapidly improving. Sounds of increasing size have been passed every second day. Some urine escapes by the meatus. Perineal wound closing.

May 15. Nearly all the urine is passed by the natural channel. No. 15 sound.

June 13. Sounds to No. 17 have been passed at regular intervals. The perineal wound has for some time been firmly cicatrized. The patient feels well in every respect, and is to-day dismissed, with the injunction never to neglect the weekly introduction of a smoothly polished No. 16 steel sound.

Remarks.—The treatment adopted in this case is based upon the following aphorism of Reybard:—"All contusions of the urethra are followed by organic stricture, sooner or later, according to the extent and degree of disorganization." * This aphorism is the result of extensive experience and experimentation, and is confirmed by the majority of surgeons who have much to do with this class of cases. Mr. Reybard gives the minutest details of the pathology and treatment of contusions of the urethra in pages 75 to 87 of his treatise, and his arguments in favor of immediate external division of the canal are, to me, very convincing. As, in this case, ordinary catheterism was unsuccessful, puncture of the bladder might have been suggested, but this serious operation would, after all, only have relieved the distended bladder, not the injured urethra, which would have inevitably led to extensive suppuration. The question of puncture of the bladder was not, however, entertained for a moment, since catheterism upon a conductor had been accomplished and had had the desired effect.

The purpose, then, of division of the urethra from without, in this case, was not to relieve a distended bladder, for successful catheterism was the first step of the operation; but the method of treatment employed had for its end:—

1. To give free egress to the urine, and thus obviate the necessity of repeated painful catheterism or the greater evil of retaining a catheter in the bladder for weeks.

2. To prevent the possibility of infiltration of urine in the connective tissue of the perinæum and scrotum, with its consequent sloughing.

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* Reybard.—*Traité des retrécissements du canal de l'urètre* Paris, 1853, page 86. Reybard's aphorism has lately been popularized in the following happy style by Professor Eugène Boeckel, of Strasbourg, viz.: "Every transverse rent of the urethra is a stricture in embryo." Professor Boeckel reports an interesting case of rupture of the urethra, where he resorted to the external division at once; but it was done in part for the relief of retention of urine. *Gazette Médicale de Strasbourg*, 1868.

3. To allow free escape of the blood extravasated in the corpus spongiosum urethræ.

4. To avert the distressing results that would inevitably ensue from this embryonic stricture.

A CASE OF ULCUS SERPIGINOSUM SYPHILITICUM.

BY J. C. JAY, JR., M.D.

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D. C. R. presented himself to me August 5th, 1871, with the following history: Native of United States, tinsmith, 31 years of age, married, has two children aged ten years and six years. His wife has had one miscarriage between the two children. R., contracted two sores upon his penis in November, 1868. These did not heal until the following March, and during January they caused œdema and phymosis. Had a papular eruption upon the body and extremities in May, which disappeared in August. In June, 1869, had two sore spots alongside of the arms, which healed in a month upon the application of a caustic. Underwent mercurial treatment for three weeks during the existence of the primary sores. Noticed at that time three kernels in the right groin.

In the winter of '69–70, he had another eruption upon the body and extremities similar in nature to the previous one. At the same time he had some scabs upon his scalp. The eruption disappeared in the early spring of 1870, when ulcerations began upon the right shoulder and right fore-arm. In the fall of the same year, the right shoulder healed, and in February, 1871, the right fore-arm healed. In March, 1871, ulceration began upon the left fore-arm, and healed completely by the middle of June, to break out again early in July, producing ulcerations, which are now present. Ulceration of the left shoulder began in March, 1871, accompanied by a discharge more profuse than that of the other ulcers. This shoulder healed and broke out again, and is at present again completely healed. R. has not had iritis, nor alopecia, nor rheumatism, nor sore-throat. Has noticed during the past year a hard prominence upon the anterior surface of the right tibia, which has never caused pain save when pressed upon. Had typhoid fever in 1862. Never had any sores previous to '68. Has had gonorrhœa once.

Present Condition.—The seat of the initial lesion does not show any cicatrix or induration. Varicocele of the left side. A node upon the anterior surface of the right tibia, sensitive to pressure. Inguinal and brachial glands enlarged and indurated. Two cicatricial surfaces upon the posterior aspect of both shoulders, each having an irregularly circular outline and a diameter of four inches. A cicatrix upon the right arm and fore-arm involving the posterior and external surface of the elbow-joint, and the whole upper half of the external surface of the fore-arm. A cicatricial and ulcerating surface upon the left arm, involving almost completely the entire surface of the lower third of the arm and upper half of the fore-arm. The ulcers upon this surface are three in number. Each is in the shape of a perfect crescent. The three of similar size. The distance between the two horns of each crescent measures two inches. These creeping ulcers present a healthy, florid, clean appearance, their surfaces very slightly depressed below the surrounding surface, and their discharge is of a thin serous character. Edge of the convex border not undermined or differing in aspect from the edge of the concave border. Two of these ulcers were advancing in cicatricial tissue, the other in normal integument. They cause the patient no pain. The cicatrix involving the flexor surface of the left elbow has contracted somewhat, rendering it impossible to completely extend the fore-arm upon the arm. This causes the patient some inconvenience in his trade. He says that the ulcers which produced the cicatrices upon the shoulders and right arm were similar in shape and appearance to those now present upon the right arm. He does not express any anxiety about the latter, as he is sure they will heal, but wishes to get some medicine to purify his blood and prevent their return. His general health is very good.

Ordered the following treatment:

℞ Hydrarg. chlor. cor............ gr. ij.
Potass. iodidi.................. ʒ iv.
Aquæ........................ ℥ iv.

M. One teaspoonful in a wineglass of water, after each meal.

℞ Ungt. hydrarg. ox. rub.
Ungt. simplicis, partes æquales.

M. et ft. ungt. To be applied to the ulcers.

August 20th. The ulcers have nearly cicatrized, and the patient is apprehensive that they have been healed too rapidly.

Dr. Emanuel Kohn, in an exhaustive treatise upon ulcus serpiginosum, published in a recent number of the *Archiv für Dermatologie und Syphilis*, describes an ulcer serpiginous in character, but differing in every other respect from that described in the above case, and he concludes that, serpiginous ulcers, as described by him, are of a non-syphilitic origin. The ulcers in the case I have related, from their shape and mode of progress, are clearly entitled to the epithet serpiginous, and from the history of the case and the results of treatment, are of undoubted syphilitic origin, leading to but one conclusion, that two serpiginous ulcers may be met with. The one, so well and minutely described by Dr. Kohn, non-syphilitic, obstinate, and intractable in its character; the other due to syphilis and readily amenable to anti-syphilitic remedies.

A CASE OF SELF-AMPUTATION OF THE PENIS,*

IN THE SERVICE OF DR. H. B. SANDS, AT THE STRANGERS' HOSPITAL.

J. H., æt. 30, single, resident of New York, was admitted to the surgical wards on July 19th, 1871. He states that he had a chancre and chancroids four years since, but gives a very incomplete history of syphilis. He has never been a strong man. On the 7th of July this patient had connection with a woman who was supposed to have syphilis. The fear of infection worked upon his mind, causing great depression. While laboring under the delusion that he was possessed of two bodies, he tied a string around the root of his penis, and amputated the organ one inch below the glans. On loosening the string, about three hours after, in order to pass water, a very copious hemorrhage occurred, and the patient states that he lost three pints of blood.

The arteries were taken up by a neighboring surgeon, but bleeding took place again, requiring a second ligation.

On admission (July 19) the patient is exceedingly nervous, weak, and pale, and walks with great difficulty. About an inch of the penis is left; this is covered with pus, and exquisitely tender over the whole surface, so that the slightest touch causes agony. The stump was dressed with a weak solution of permanganate of potash.

July 20th. Patient is improved this morning, having slept well. The dressing of the wound is accomplished with the greatest difficulty.

July 21st. Patient slept very well, and is doing nicely. The surfaec of the wound is covered with pus and slough. Sulphate of morphine was ordered to be sprinkled over the raw surface to relieve the pain. Patient is very much troubled with erections, and takes camphor and brom. potas.

July 23d. To-day he was etherized and the stump was washed with sat. sol. argent. nit. He suffered great pain for three hours after the application. Ordered Magendie's solution, hypodermically, seven drops hourly, until relieved.

July 24th. The patient feels no pain in the penis, for the first time in two weeks. Stump granulating well.

July 26th. Erections are not so frequent since the potass. bromid. and camphor.

July 29. Stump looks extremely well; the granulations are healthy. Compression made with adhesive straps.

August 2. Cicatrization taking place rapidly and nearly completed. Patient's general condition is greatly improved, and he is discharged at his own request.

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* Reported by Dr. M. D. Mann, House Surgeon.

FOUR CASES OF CONTAGIOUS IMPETIGO.

BY R. W. TAYLOR, M.D.,
Surgeon to the New York Dispensary, Department of Venereal and Skin Diseases.

These cases were observed and treated by me at Professor Wm. H. Draper's Clinic for Diseases of the Skin at the College of Physicians and Surgeons. They present several points of interest, as proving the existence of this rather rare disease, which was doubted by some observers, and they agree precisely in their clinical history with the description given of it by Dr. Tilbury Fox.

A woman brought two of her children to the College on the third of July, 1871, stating that her elder daughter, aged four years, had, while at school, contracted an eruption from a child who had a similar eruption upon the hands. The rash upon her child was seated upon the face, particularly around the mouth and upon the surface of the chin. The eruption, as then seen, consisted of several large patches, some isolated and others confluent, of an erythematous integument, surrounded by a desquamating fringe, which appeared as if several of the superficial layers of the epidermis had been cast off, and the slightly inflamed but rapidly healing surface left. This erythematous integument had none of the features of a declining eczema; there was no infiltration, no tendency whatever to scale, and though erythematous and glossy, it did not resemble the immature pellicle of epidermis seen after a very recent eczema. A similar erythematous condition is seen after slight vesication from scalds. Besides these healing patches, there were others which had gone through the same stage, and in which the erythema had faded. On the chin were several round, dry crusts, of a straw color, of the thickness of blotting-paper, and presenting a slightly laminated appearance, as if formed of epidermis and dried pus. These crusts were slightly elevated above the integument, and appeared as if laid upon it. Some of them were readily detached, under them was seen the erythematous surface, as above described, whereas others were just separating at their periphery, and others still were as yet adherent. The eruption had not been ushered in by any noticeable febrile symptoms, and throughout its course did not itch very much. This eruption had commenced on the twelfth of June, and on the first of July it was noticed to have appeared upon her younger sister. This child was four months old, and having been healthy up to two days prior to the appearance of the eruption upon her, she was then noticed to have a well-marked fever at night, which recurred for three days, and therefore ceased one day after the evolution of the eruption. When first seen, the child's mouth was surrounded by crusts, which only differed from those of the other child in the fact that as they were more recent, and not having become desiccated, were a little darker in color than those of the other child. They were elevated above the level of the skin, and as one or two of them had been detached by the child's nails, it could be seen that they were seated upon an erythematous non-ulcerating surface, similar to that observed in the first case. Similar crusts were also seated upon the under surface of the jaw, which, as the child's neck was short and fat, was in very close contact with the shoulders, and upon this latter surface the lesion could be observed in its commencing and developing stages. There were upon spots, which exactly corresponded to those upon the under surface of the jaws, numerous vesicles which were sparsely scattered. Some of these vesicles were very minute, others quite large, and on the latter there was a minute umbilication. There was a very slight areola around each vesicle, but it was greatest around the smallest ones. This vesiculation would represent the elementary lesion of the affection. There were also vesicles which had further developed, and which instead of raising up and forming large prominent bullæ, had extended over an area of surface of from one line to half an inch, and some even to an inch, and attained a prominence of not more than one-half of a line. These vesicles contained a thick sero-purulent fluid, and the whole formed a soft light-colored crust. This condition would represent the second stage of the lesion, and the third would consist in the dry, straw-colored, slightly elevated crusts, reposing upon the erythematous surfaces seen in the former child, but not as yet in this. No internal medication was prescribed, but the mother was directed to anoint the parts with benzoated ointment of oxide of zinc.

On the tenth of July the case presented a marked change. There were many of the erythematous spots of various sizes from half to two inches in diameter, some round, others irregular; in color some were of a bright red, whereas others had become of a dull red, and were rapidly disappearing. Besides these erythematous spots there were several of the typical crusts, which had then become desiccated and were separating at their margins, showing the full development of the lesion. It was evident that the affection was declining, although two very minute vesicles were to be seen in one of the folds of the skin of the neck. Besides these patches upon the face, neck, and shoulders, there were two others upon the legs.

At this date the mother presented a typical flat vesicle, oval in shape, and not much elevated, which was seated upon the second phalanx of the right ring-finger, and looked very much like a scald. In a week she returned, and it was observed that the vesicle had run the usual course, a crust having formed and fallen off, and left an erythematous spot. At this date she brought her third child, aged two years, which presented the eruption in its declining stage, and stated that it also had had slight febrile symptoms previous to the appearance of the rash. A young physician, who was anxious to prove if possible the contagious nature of this disease, allowed me to inoculate him with some of the crusts of the last child. The epidermis was very superficially scraped, not sufficiently however to produce blood, and upon this surface a portion of crust, slightly moistened, was placed, and retained by a piece of isinglass plaster. In about a day a burning sensation was felt, which was severe and persistent, and when, at the end of the second day, the plaster was removed, a crust very much like those of the children, and slightly elevated, was seen, which soon fell off, and an erythematous spot was left where it had been seated.

The observation of these cases enables us to present a complete clinical history of this rare and curious affection. From the statement of the mother it is reasonable to conclude that the pus was conveyed from one child to the other by contact, and also that she herself contracted the affection upon her finger in dressing the sores upon her children. A further proof of the contagious character of the pus is shown in its ready inoculability upon another person. It would seem from a perusal of these cases that the febrile movement which precedes the appearance of the cutaneous lesion is greater in very young children than in those who are older, but that it is not of a very intense character in any case. The clinical history of the lesion, as presented by these cases, seems as follows:—Minute vesicles, more or less copiously or sparsely scattered, and seated upon an erythematous surface, are developed. They become larger, and assume a flattened form, sometimes umbilicated, attaining usually an area of from a line to one half an inch in diameter, and perhaps one or more may coalesce. These flattened vesicles, when mature, consist of thin epidermal covering and pus, which rapidly desiccates, and as a result the whole forms the peculiar crusts which at first are rather dark, but which rapidly assume the characteristic straw color and dry consistence, and are elevated above the level of the integument. As the crust desiccates it becomes detached, at first at its margins, and finally in its whole extent, when it falls, and it then leaves an erythematous patch, which soon assumes the natural color of the skin. It seems that there is no tendency to ulceration, and that the inflammation involves only the superficial portions of the derma and epidermis, and that there is very little tendency to the formation of pus; but ulceration and pustulation may be caused by scratching. In each case a cure was rapidly effected by the application of benzoated zinc ointment. This preparation seemed to cause the vesicles to wither and rapidly disappear, a result which is much to be desired, as it relieves the patient upon whom the eruption exists, and renders others less liable to the contagion. Dr. Fox states that he has used the white precipitate ointment with excellent results.

Epitome of Current Literature.

Cancer of the Skin.—Dr. Hingston exhibited to the Medico-Chirurgical Society of Montreal a patient, Edward Foster, whose skin was covered with nodulated masses of a stony hardness. He is 50 years of age, tall, straight, and immensely powerful. His parents were Scotch; both died of inflammatory diseases; has lost five sisters and one brother by phthisis. In early childhood had noticed a small swelling over left temporal region, which remained stationary upwards of forty years. Eight years ago it was torn by a piece of wood, when it grew to the size of a small egg. Five years ago it was removed by Dr. Dubec of this city, but the disease returned before the wound had healed. Dr. Hingston had removed it at about the same period every spring for the past *four* years. After last occasion disease did not return, and the skin over temporal region is now healthy and free. Shortly after last operation, in April last, small bead-like bodies were felt in different places in the skin. These have steadily increased in number and in size until the present time, when upwards of two hundred can be counted, varying in size from a marrow-fat pea to a turkey egg. The are all freely movable with, but not in the skin. They are apparently all confined to the skin. All the functions of the internal organs are seemingly uninterfered with; the tongue alone gives evidence of the presence—one large nodulated mass occupying the left side of that organ. Within the past couple of months the large tumor in the lower part of the abdomen opened, and soon we had the characteristic odor of open cancer. Coeval with the opening the patient's health failed considerably. He cannot sleep; is always more or less feverish; his appetite is indifferent; and he is much emaciated. Dr. Hingston then, in a short *résumé*, said:—Cancer of the skin commonly occurs secondarily, or by extension; here, primarily. He called attention to—1. History of case; stationary for forty years. 2. Five years ago, when removed for second time, was of an almost bony hardness. 3. Four years ago, when removed, less dense, presenting character of cartilage. 4. Three years; appeared like fibro-cartilage. 5. Two years ago, appeared like recurring fibroid; but, unlike recurring fibroid, did not again recur in original site. 6. The surprisingly numerous multiplications of solid growth, some of which are presenting characters like the original; but some, also, rapidly degenerating into scirrhus and open cancer.—*Canada Medical Journal*, February, 1871.

Anatomy of a Case of Elephantiasis.—Professor C. Van Lair, after making an exceedingly accurate examination of a case of elephantiasis arabum of the lower extremities, and comparing the results with those of other authors, is led to the following conclusions:—The elephantiasis dura of the extremities is based essentially upon a hyperplastic, not a heteroplastic process. The first symptom is a peculiar erysipelas—elephantiastic erysipelas. The second stage of elephantiasis is characterized by a progressive hyperplasia of the corium affecting equally all three layers—papillary body, connective tissue, and elastic—with corresponding atrophy of the subcutaneous adipose tissue. With the increase of the papillary body is connected a luxuriation of the epidermis. The stage of acme is designated by a hypertrophic coalescence of the two chief layers of the skin, while the papillary body, though likewise hypertrophic, always remains distinctly limited, and the adipose layer disappears more and more. The papillary body retains its physiological type longest. The fact that certain localities remain free from elephantiastic swelling is explained by the pressure which the skin exerts upon itself, *e. g.*, in the folds about the joints. The deep layer of the corium of the affected parts is distinguished from the superficial layer, not alone by the general direction of its fibres and by serous infiltration, but also and chiefly by its color, which varies from yellowish to brown, owing to the prolific development of elastic tissue.

In the beginning of the second stage lymphatic cells accumulate in heaps in the upper layers of the connective-tissue stratum, as well as in the interstices between the bases of the papillæ. These cells, but not the accumulations, are common to elephantiasis, simple erysipelas, the first period of scleroderma, and œdema of the skin. These heaps of cells evidently owe their origin to the emigration of colorless blood-corpuscles. Their signification has not yet been demonstrated.

Clinically, the elephantiasis dura deserves the name of "diffuse fibroma," given to it by Virchow, only in the third stage. In the first periods the hyperplasia is too comprehensive, and runs too specific a course to be put upon the same plane with simple fibromatous new-formation.— *Virchow's Archiv.*, Feb., 1871.

Toxical Effects of Hydrate of Chloral.—Dr. Nathan R. Smith describes a singular affection of the fingers of both hands, attended with desquamation of the cuticle and superficial ulceration, especially about the borders of the nails, following the use of chloral, in liberal doses, as a hypnotic.

This distinguished Professor also reports two deaths in Baltimore, manifestly from the toxæmia caused by an overdose of chloral. These cases are, it appears to him, amply sufficient to establish the toxical effects of this powerful agent. It is probable that its poisonous effects are exerted in two ways:—

1st. When given in a large dose, and especially when the system may have been charged with it by its previous administration, it at once overwhelms the powers of life, and causes immediate death. Upon what organ or organs does it exert its deadly effects? It must be either upon the heart or the brain, perhaps on both. It is believed that chloral, entering into the blood, develops chloroform in that fluid—the amount developed being determined, not merely by the quantity taken, but by the condition of that fluid. 2d. It appears, when given in small doses, and continuously for some time, to induce a form of toxæmia similar to that caused by the continued administration of ergot. Its effects on the fingers of both hands, in the two cases related, would justify such a belief. It is well known that animals fed on spurred rye suffer gangrene of the extremities.

If chloroform, developed in the blood from chloral, is productive of such disastrous effects, primary and secondary, he inquires, Can the direct inspiration of chloroform be as innocuous as it is thought to be? In closing, the remark is made: "Whoever will take the trouble to look over the medical journals and retrospects of the last two years, will discover that pyæmia, or septicæmia, occupies far more space in surgical records than it did before anæsthetics were so generally employed.

Encysted Hydrocele.—Dr. Guersant observes that this form of infantile hydrocele consists in a small tumor, of greater or less size, developed in the course of the cord. It does not produce any change of color of the skin, is fluxuating and transparent, more or less resisting, slipping readily between the fingers as they grasp it, descending when we endeavor to bring down the testicle, and again mounting upwards towards the ring when we relinquish our hold. This is a proof of its undoubted connection with the cord of the testicle. This tumor is developed without appreciable cause, does not produce pain, remains a long time stationary, and sometimes increases in value. It never terminates in any alarming manner. It should not be confounded in children with varicocele, for he has never observed these venous dilatations in the youngest children, and he makes the same remark in regard to hæmorrhoids; neither should it be confounded with a hernia, for it does not pass back into the abdomen. The surgeon should be aware, however, that false encysted germs, very rare tumors having special characters,—non-transparency, for example,— are met with in this region. In encysted hydrocele, the simple injection of alcohol has generally been sufficient to produce a cure. A small seton, introduced in the same way as in an abscess, has also given good results, without very intense inflammation and without any recurrence.—*Medical News and Library.*

On the Unity of the Syphilitic Poison.—Mr. S. M. Bradley (of Manchester) read a paper, and commenced by showing that in order to demonstrate the unity of the syphilitic poison, it was necessary to produce a soft sore upon a virgin subject, by direct inoculation from a hard infecting sore; to produce, in other words, a sore indefinitely capable of auto-inoculation, but never followed by constitutional symptoms, from a sore which was (very generally) incapable of auto-inoculation, and which was followed by constitutional taint. He went on to say he had made numerous experiments to ascertain whether this interchange did or did not ever occur, and with the results which are now made public. His subjects were monkeys, kittens, and guinea-pigs; the virus he employed was obtained from cases of syphilis met with in private practice, in Lock Hospital, and in the venereal wards of the Manchester and Chorlton Work-houses. He obtained the matter for inoculation by scraping the surface of the sore prior to cicatrization, with either a piece of glass or an ivory vaccination point. The great majority of the experiments gave negative results. In two instances, however (one in a guinea-pig and one in a kitten), the inoculation was followed after the interval of two or three weeks by local thickening at the site of puncture, and later by the outbreak of constitutional symptoms. The guinea-pig died within a month from the commencement of thickening, with disorganization of one eye, and extensive ulceration of the mouth and soft palate; in the kitten killed at the end of the eighth week were found gummata in the kidney and liver. Omitting failures and the two cases of syphilis mentioned above, he obtained three successful results, the details of which were given. In these experiments, the initial lesion was never irritated by any application; Mr. Bradley merely used the secretion obtainable from the surface of the untreated sore. When the sore was irritated by savine, it was comparatively easy to procure abundant and, as a rule, ready inoculable pus. He never succeeded in obtaining positive results with matter taken from a phagedænic sore, or with scraping the surface of one which was entirely void of all secretion. Mr. Bradley proceeded to draw a parallel between the two forms of syphilis and the evolution of the vegetable parasites, or epiphytes; alluding to the fact that all the fungi infecting the human subject are interchangeable, and mutually producible, and yet, as a clinical fact, it was well known that this interchange took place but very rarely—it seemed probable to him, indeed, that the same causes which operated in this low region of the vegetable kingdom (*i. e.*, differences in the soil and in the age, etc., of the seed), were also the efficient causes in determining the character of the syphilitic sore, although we are not yet in a position to decide the precise force which each of these causes possesses.—*Transactions of the British Medical Association*, August, 1871.

On the Extension of Inflammation from the Epididymis to the Urethra.—Mr. Furneaux Jordan claims that inflammation of the prostatic urethra from any cause (injuries, operations, foreign bodies, urinary obstructions, or adjacent inflammations), may extend to the epididymis. It would be an original discovery to find any variety of prostatic inflammation which might not run by continuity along the submucous connective tissue of the vas deferens. He was not aware that any one had observed the courses of this. He had recently watched a case in which inflammation unmistakably travelled from the epididymis to the urethra. A married man, free from disease, and the history of disease, suffered from the effects of a severe blow on the scrotum. On the subsidence of scrotal swelling, the left epididymis was found to be enlarged, painful, and tender. The next day the adjacent portion of the vas deferens was tender, and swollen to the size of a goose's quill to near the inguinal ring. The following day the swelling of the cord extended into the ring. A few days later a slight urethral discharge appeared, and all the symptoms of a mild urethritis. Mr. Jordan believed any new fact to be of value which would help to explain urethral discharges.—*Transactions of the British Medical Association*, August, 1871.

Therapeutical Notes.

The Treatment of Psoriasis.—In an exceedingly interesting paper on the treatment of psoriasis, Dr. Tilbury Fox suggests the following therapeutical directions. He says:—"I find it of very essential importance to meet the lymphatic and strumous diathesis by the free exhibition of cod-liver oil. This is a course I never omit, and I think it serves me well. I have mentioned the syphilitic taint. If, as sometimes happens, the psoriasis takes on an eczematous appearance, I regard this as an indication that the nervous system is specially deficient in tone, and I have recourse to nervine tonics accordingly.

"When should we give arsenic? I think in cases where the scaliness is well marked, and the disease in other respects typical, that is, attacking the elbows and knees as well as other parts; where there is nervous debility; after we have counteracted gouty influences, and got the excreting organs into due working order, if necessary; and when the disease is chronic. But I specially desire to speak of the results to be obtained by a judicious use of external measures, in connection with the remedies indicated, as appropriate to meet the several accompanying conditions referred to.

"I have already said that in acute and general psoriasis, the skin is very readily stimulated and congested, and when this is done the disease is likely to spread; so I have found over and over again. Hence I conclude—and the treatment adopted in the supposition shows how true the conclusion is—that in the early stages of every case of psoriasis, especially in the young, where congestion is marked, and especially where the disease shows a tendency to spread, and to develop itself in new places, the skin should not be stimulated, but simply soothed, the object being to diminish, prevent, and dispel congestion, through the agency of which the disease is enabled to spread and develop, whilst we exhibit appropriate internal remedies. In the later stages, and in certain cases from the beginning, stimulating the skin is not followed by any but good results; but here congestion, if present, is not of the active, but rather the passive kind; and these remedies should be employed where new patches are developing, and the scaliness, rather than redness, predominates. Here is a ground for us, then, in the use of local applications in psoriasis, palliatives in the early and congestive stages, and stimulants, resolvents, revulsives in the indolent and chronic stages, where the cell-changes are the most noticeable feature.

We next come to the cases of ordinary psoriasis in the adult, of an acute character, and in which the disease is characterized by a certain amount of congestion. Alkaline and bran baths, with inunction of oil in the first instance, prepare the way for a more effective plan of remediation.

But so long as fresh spots are appearing, as a rule I withhold tarry preparations; and if there be any pyrexia, or the skin be irritable and congested, I use the simple diuretics freely. Of course, attention must be specially directed to the mode of life, mal-assimilation, nervous debility, etc. But, supposing that the body is partially affected, and the scaliness is the most marked feature, and the patches of disease are not particularly thickened, the patient being in tolerable health; it is in such examples that water-dressing and wet packing are of so much value. In these cases we may take one or two places and apply wet rags, with oiled silk outside, in the evening before the patient goes to bed, as he sits and does his writing or his smoking. An arm and a leg, or two arms may be taken one night, and a second leg and arm the next night. By the time the patient goes to bed, the patches have undergone sufficient maceration; the scales can all be removed, and some greasy application can be used. The following is a very good one to an ordinary case of psoriasis which is passing on to the chronic stage:—

℞ Nitrate of mercury ointment, ʒ j to ʒ ij.; Powdered oxide of zinc, ʒ ij.; Sol. of lead (aqua plumbi), ʒ jss.; Carbolic acid, ʒ ij.; Olive oil, ℥ j or ℥ jss.

The carbolic acid can be gradually increased, or pyroligneous oil of juniper substituted for it. The water-dressing is sometimes too stimulating, in which case it must be used less frequently, whilst oil inunction should be more freely practised.

As the disease is, or becomes more chronic, strong tarry preparations may be used, the object of these being to check the cell-proliferation without over-stimulating the skin. When the disease becomes still more chronic and indolent, and when the patches are much thickened, or where certain old spots continue to exist in particular parts without change, it is then that the so-called soap-treatment and the use of absorbents and revulsives are called for, and are found to be very efficacious. The soap-treatment consists in rubbing soft-soap, from two to six ounces, according to the extent of the disease and the sensitiveness of the patient, into the diseased patches very firmly with a piece of rag night and morning, until the epidermis is rubbed off and the congested derma bleeds; successive rubbings being adopted towards different regions day by day, the patient being kept in a blanket all the while.—*The Practitioner*, March, 1871.

Carbolic Acid for the Relief of Pruritus.—Professor Binz, of Bonn, has brought into notice the advantage to be derived from this method of treatment. Pruritus, as is well known, chiefly attacks people of advanced age, and produces very serious discomfort. The violent itching leads to constant scratching, which occasions secondary lesions of the skin. Few remedies besides arsenic appear to have influence upon it. Last year careful investigations were undertaken by Von Hebra to determine the value of carbolic acid, proceeding on the good results derived from its use in other dermatoses. These inquiries demonstrated that both prurigo (in which itching swellings occur) and pruritus (in which itching occurs without anatomical lesion) may be alleviated by the ministrations of carbolic acid. In one instance a man of 74 years of age, of good position, who had suffered for more than two years from violent itching of the skin, began to take carbolic acid according to the Viennese plan, namely, in form of pills made up with extract of liquorice, containing at first one and one-half grains of the acid, but gradually rising to fifteen grains per diem. The effects were immediately apparent, and improvement still occurred as the dose was increased. To ascertain whether the improvement was or was not accidental, the use of the acid was discontinued on several occasions, but the itching was immediately observed to increase in severity, whilst it again diminished when the medicine was recommenced. After, on one occasion, the medicine had been taken for five weeks continuously in quantities amounting collectively to fifteen grains per diem, gastric disturbances supervened, which, however, disappeared as soon as the medicine was given up. The use of the acid has not produced a complete cure, but it has so far mitigated the symptoms as to enable them to be easily borne. A second case is recorded occurring in a young man, in which the acid effected no improvement, whilst the disease was speedily cured by the use of arsenic internally. From this it would appear that there is more than one kind of pruritus, requiring different methods of treatment. Morphia, it is well known, will occasionally induce a temporary attack of pruritus.—*Berliner Klin. Wochenschrift*, 1870.

Lupus Retarded by the Galvano-Cautery.—Dr. D. W. Cheever, of Boston, reports an obstinate and extensive case of lupus of fifteen years' standing, involving the right and left alæ nasi, under his observation, at the Boston City Hospital, and which was relieved by the judicious use of the galvano-cautery. When the patient was discharged, the edges of the ulcer presented healthy granulations, no new tubercles or ulcerations having appeared.—*Boston Medical and Surgical Journal.*

Liquor Potassæ in Tinea Tonsurans.—Dr. H. S. Purdon states that he was asked to prescribe for two children who had had tinea tonsurans for eight months, during which time a variety of parasiticides were tried. Dr. P. ordered a carbolic acid lotion, with ablutions of juniper-tar soap, with a good diet and quinine. This treatment the parents tried for only one week, and four months subsequently Dr. P. learned from the mother that they had been cured by a preparation which Dr. P. afterwards ascertained was liquor potassæ. The method of application was to paint the patches, and absorb any excess of fluid with blotting-paper, and in case smarting was produced, to apply cold-water dressings. Dr. P. states that he has tried it since with good effects—*Journal Cutaneous Medicine*, March, 1871.

Treatment of Herpes Circinatus by Local Astringents.—Dr. C. H. Robinson thinks that local treatment is all that is necessary in herpes circinatus, and does not advise a constitutional treatment. The applications which he advises are the muriate tincture of iron, sulphate of copper, and tincture of iodine. He cites six cases thus treated, and we observe that he does not confine himself to the use of one agent in each case, but uses two or three. Thus in case first he first applied tincture of iodine, then tincture of iron, then sulphate of copper. The average duration of the eruption, under this treatment, was nine days.—*Practitioner*, July, 1870.

On Paralysis of the Bladder, and its Treatment by the Constant Galvanic Current.—Dr. Julius Althaus read an interesting paper before the British Medical Association on the above-named subject. He eliminates from this affection all cases of mere atony of the viscus from over-distension owing to organic obstructions, such as stricture of the urethra and hypertrophied prostate, and other causes; and likewise all cases of incontinence of the urine which is generally ascribed to paralysis of the sphincter vesicæ. Real paralysis of the bladder is, according to Dr. Althaus, only observed (*a*) when the conduction of nervous influence from the pedunculus cerebri to the bladder is interrupted; (*b*) when the lower part of the lumbar portion of the spinal cord is diseased; and (*c*) when the normal excitability of the motor or sentient nerves of the bladder is pathologically altered without any central affection being present; most cases of this latter class being of the kind termed reflex or inhibitory paralysis. After reviewing the treatment generally adopted for this condition, the author expresses his opinion that, both in efficacy and quickness of action, the constant galvanic current properly applied is superior to all other remedies which are used for this affection. He then describes the best mode of applying the current in such cases, and winds up by relating three cases illustrative of the different varieties of the complaint.—*Transactions of the British Medical Association*, August, 1871.

On the Treatment of Stone in the Female Bladder.—Mr. Christopher Heath read a paper, illustrated by three cases which had occurred in his own practice. The first case was in a patient, æt. 32, who was subjected to lithotrity, a stone weighing four drachms, composed of phosphates, with a nucleus of oxalate of lime, being removed in five sittings with complete success. The second case was in a married woman, æt. 49, in whom a large stone was perfectly felt per vaginam. Vaginal lithotomy was performed, and a stone of an ounce and a half, and measuring two inches by an inch and a half, was readily removed, the wound being closed immediately with six silver sutures passed through the entire thickness of both vagnial and vesical wall. The patient made a rapid and complete recovery, without the formation of any fistulous opening. The third case was that of a child, æt. 11, in whom the urethra was rapidly dilated, and a small stone extracted, when there was found to be a much larger mass fixed to the bladder, which was removed with dfficulty after being partly broken up, the whole mass weighing nine drachms. The child had incontinence for a few weeks after the operation, but eventually recovered complete control over the bladder. Mr. Heath briefly contrasted the three proceedings, maintaining that rapid dilatation of the urethra within certain limits was a perfectly harmless and most useful practice. He advocated lithotrity for moderate-sized stones in the adult, but for large stones preferred vaginal lithotomy, with immediate closure of the wound, a proceeding which experience had proved to be remarkably successful.—*Transactions of the British Medical Association*, August, 1871.

Treatment of Chronic Gonorrhœa, Gleet, and Leucorrhœa by Ice.—Dr. G. A. Abrath calls the attention of the profession to the value of ice in these troubles, and states that he has obtained good results from its use. He adopts the following method of application: The bladder is to be evacuated, and the urethra washed out by the injection of a little cold water; then about six icicles are introduced in succession into the urethra, each being allowed to melt there; this procedure is to be followed night and morning. In cold climates these icicles are readily formed upon a central stem, whereas in warmer climates ice-machines may be used to manufacture them (*sic*). Dr. A. thinks it is also necessary to inquire into the condition of the patient's health, and to remedy any trouble if present. Besides gleet, he has derived benefit from this treatment in leucorrhœa, even complicated with ulcers upon the cervix uteri; he also advises general treatment if necessary. —*Medical Times and Gazette.*

Gonorrhœa Treated by Warm-water Injections.—Dr. John O'Reilly states that after using the usual anti-blennorrhagies and injections very largely in gonorrhœa, he settled upon a mode of treatment which appears to him to be more rational, and which does not travel the circuit of the system. He alludes to the treatment of catarrhal conjunctivitis by tepid applications constantly used, as being attended with recovery in a few days, and was convinced that a similar treatment would be beneficial in gonorrhœa. He thinks that the disease is perpetuated by the constant bathing of the inflamed parts in pus, and that a continuous stream of warm water would at the same time soothe and wash away the discharge. His method is as follows: A Davidson's syringe, with a nozzle as large as the meatus will admit, is introduced every hour, and warm water thrown in. The object of using the large nozzle is to thoroughly distend and cleanse the urethra, and at the same time to prevent the too easy escape of the water. The usual length of time required for the cure was about seven or nine days, during which the patients were kept on hospital diet, and with no other drink than water. He states that some cases were not cured as rapidly as this, but that the delay was due to carelessness of the patients in injecting their urethra. In cases which were slow to recovery, he added a few grains of sulphate of zinc, and that if there was much inflammation of the penis, a poultice, with a few grains of sugar of lead upon it, readily controlled it. He speaks of the rarity of chordee and epidydimitis under this treatment. He states that in hospital practice he numbered his cures by hundreds, and that in private practice he adds six grains of sulphate of zinc to the half-pint of warm water, and orders its frequent and continuous injection as in the other cases. Under this treatment, also, he obtains cures in seven or eight days. He arrives at the following conclusions:—

1. That gonorrhœa yields to local treatment and even water injections.
2. That water injections or medicated lotions owe their efficiency to their frequent application.
3. That the common small syringe should be abandoned in treating this disease, and those substituted which throw a continuous stream.

4. That large injections, by fully distending the mucous membrane of the urethra, insure a speedier cure than those less copious—*American Practitioner*, April, 1871.

Medicated Bougies for Gonorrhœa.—Dr. C. J. Cleborne remarks on the use of "Medicated Bougies in Gonorrhœa." For over ten years I have used medicated urethral bougies in the treatment of this disease, and also of gleet, but, I must confess, with not much better success than I obtained from the use of astringent injections carefully and faithfully employed. At first I used pipes of astringent substances, but found them objectionable on account of their friability, breaking off in the urethra, etc. I then formed bougies out of a rod of lead of the proper thickness, by cutting them the required length, carefully rounding the extremity of each; and after splitting the top of the bougie to the extent of a quarter of an inch, the ends were flattened, as in Fig. 1. Then by punching a hole in two narrow strips of isinglass plaster placed crosswise, and thrusting the rod through the opening thus made, a lead urethral bougie is formed, which may be used alone, or medicated with astringent or sedative substances. Before the bougie is introduced it should be dipped into warm oil or water; and after its insertion the strips of isinglass plaster are to be moistened and applied to the glans penis. In this manner the bougie is firmly secured in place, and, if necessary, the patient can pursue his ordinary avocations without interfering much with the treatment. In some cases the simple introduction of this lead bougie has been found of use. By immersing it in acetic, nitric, or other acid, until a coating of the compound thus produced was obtained, and then inserting it into the urethra (allowing it to remain from a few minutes to one or more hours), a speedy cure has in some cases followed. I have sometimes with advantage coated a smaller bougie with carbonate of lead, mixed with cocoa-butter to a consistence hard enough to admit of introduction into the urethra, and yet to melt at temperature of body. In this way the extracts of opium, belladonna, hyoscyamus, etc., tannin, and the various astringent preparations of lead, zinc, etc., may be introduced. Soluble substances may be combined with a

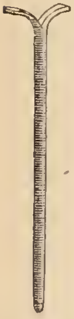

FIG. 1.

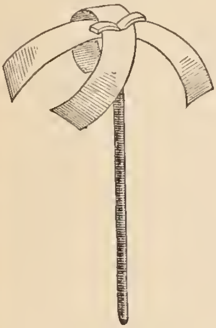

FIG. 2.

solution of gelatine, and the bougie dipped into this preparation until a sufficient coating is obtained. The advantage of this mode of treatment is its convenience, as well as the certainty of having the astringent or sedative substance in constant contact with the affected parts; but invariable success is no more to be expected from this than from any other method.—*Medical Record.*

Treatment of Hydrocele by Injection of Chloroform and Compound Tincture of Iodine.—Dr. Moses Barrett reports a case of hydrocele of the left testicle, in which about four ounces of fluid were drawn off, and the following mixture injected into the sac:—℞. Chloroform and comp. tinct. iod., of each 1 drachm; aqua, ad. 1 ounce. This was allowed to remain between three and four minutes. Sharp pain in the scrotum and back was experienced, with nausea and faintness. There was, for a few days, some swelling and tenderness of the scrotum, which was relieved with a lotion of acet. plumb. The recovery was perfect.—*Transactions of the Wisconsin State Medical Society.*

Remedies for Poison-Ivy.—The *Druggists' Circular* gives several methods of treatment, and specifies several drugs, which have been beneficial in this very troublesome affection. The details were given by members of the Farmers' Club of the American Institute, who had been thus poisoned. One individual immersed his feet in soft soap for three-quarters of an hour, and was entirely cured in two days. Being a victim a second time, he used the soap again with the same effect. This observation was confirmed by another gentleman, who considered it equally useful in poisoning by sumach. Another person attributed excellent results to a strong tea of sweet fern, with which the parts are washed, the lotion being used as hot as can be borne. Two other unfortunates contributed their mite of knowledge, the one having used pure water as a preventive, the other extolling the curative effects of hot bran poultices, or even hot water. Another had been much relieved by a poultice of the bruised leaves and stalks of the wild lettuce (*lactuca elongata*); the expressed juice had also been found of benefit. This remedy is said to cure when all others fail. A saturated solution of sulphate of copper or of common salt are also said to be of benefit when the irritation first makes its appearance. Finally, another gentleman observes that there are two kinds of ivy, a five-leaved variety and a three-leaved variety, and that the latter always poisons, but that the former does not, and that the juice of the former is an invariable antidote to the ill effects of the latter.

Obituary.

GEORGE D. BLACKMAN.

The death of this distinguished surgeon and clinical teacher is a serious loss to the profession, which he so well adorned, and a more serious loss to the public, whom he served so faithfully during his whole professional career. Although but fifty-two years of age at the time of his death, thirty-six had been studiously devoted to the pursuit of his profession. He was graduated in New York; but his health appears to have suffered mental tension in the acquisition of medical knowledge, and he therefore assumed the duties of surgeon of a sailing-vessel, remaining for a while in London after making several voyages. Here he made the acquaintance of the most distinguished surgeons, faithfully devoted himself to the various clinical advantages offered him, and became a member of the Medico-Chirurgical Society. When he returned home he became a frequent and liberal contributor to medical literature, especially in able reviews of prominent surgical works, and translated Vidal de Cassis' treatise on Venereal Diseases. He was appointed, in 1854, Professor of Surgery in the Medical College of Ohio,—a position held by him at the time of his decease. He was also Surgeon to the Cincinnati, Commercial, and Good Samaritan Hospitals. Some of the rarest, boldest, and most successful operations ever performed in this country were skilfully executed by him, both in private practice and in the lecture-room; for in the latter he possessed not only the qualities of a brilliant lecturer, but also of a clear and earnest clinical teacher. During our late civil war he served as Surgeon of Volunteers. His death was ascribed to cirrhosis, with abdominal dropsy.

Editorial.

About Books.—In the next number of the Journal we shall commence a new department—about books. It is our intention to devote a few pages of each Journal to short critiques and reviews of all medical works sent to us for that puropse. It was our intention originally to review only such works as bore directly on Syphilography and Dermatology: in these branches we shall continue to review fully all works of any importance that are published. In the interest of our readers, we shall hereafter devote sufficient space to convey a correct idea of the character and importance of works on general medicine.

Recent Advances in the Pathology and Treatment of Skin Diseases.—In order to publish in full, in this number, the interesting Essay by Dr. B. Joy Jeffries, we have been forced to postpone the publication of many other valuable contributions and selected articles which will appear in our next issue.

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